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CHO, BHK, 293 cells, insect cell, Vero
expressed hCG

a-g, n, q = 1; h = 1 to 3; j-m, i, o, p
(independently selected) = 0 or 1; r-u
(independently selected) = 0 to 1; v-z = 0

↓
1. Sialidase
2. CMP-SA-PEG, ST3Gal3

a-g, n, q = 1; h = 1 to 3; i, o, p (independently selected) = 0 or 1; r-u (independently selected) = 0 or 1; j-m, v-y (independently selected) = 0 or 1; R = PEG; z = 0.

FIG. 55B

Insect cell, yeast, fungi expressed hCG
a-d, f, h, j-m, o, p, s, u, v-z = 0;
e, g, i, n, q, r, t (independently selected)
= 0 or 1.

↓
1. GNT's 1&2, UDP-GlcNAc
2. Galactosyltransferase, UDP-Gal
↓
2. CMP-SA-PEG, ST3Gal3

b, d, f, h, k, m, o, p, s, u, w, y, z = 0;
a, c, e, g, i, n, q, r, t (independently selected)
= 0 or 1;
j, l, v, x (independently selected) = 0 or 1;
R = PEG.

FIG. 55C

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CHO, BHK, 293 cells, insect cell,
 Vero expressed hCG
 a-q, r-u (independently selected) = 0 or 1;
 v-z = 0.

↓

1. sialidase
2. CMP-SA, ST3Gal3
3. CMP-SA-PEG, ST3Gal1

a-h, i-o, q, r-u (independently selected) = 0 or 1;
 v-y = 0; p, z = 0 or 1; R = PEG.

FIG. 55D

CHO, BHK, 293 cells, insect cell or
 Vero expressed hCG
 a-g, n, q = 1; h = 1 to 3;
 j-m, i, o, p (independently selected) = 0 or 1;
 r-u (independently selected) = 0 or 1; v-z = 0

↓

1. CMP-SA-PEG, ST3Gal3

a-g, n, q = 1; h = 1 to 3;
 i, o, p (independently selected) = 0 or 1;
 r-u (independently selected) = 0 to 1;
 j-m, v-y (independently selected) = 0 or 1;
 R = PEG; z = 0.

FIG. 55E

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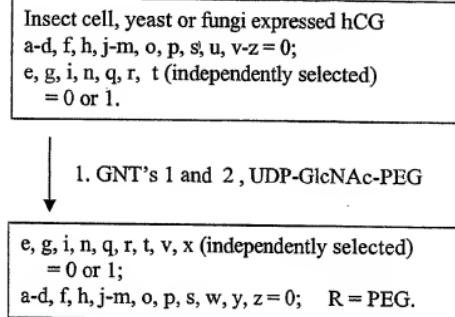


FIG. 55F

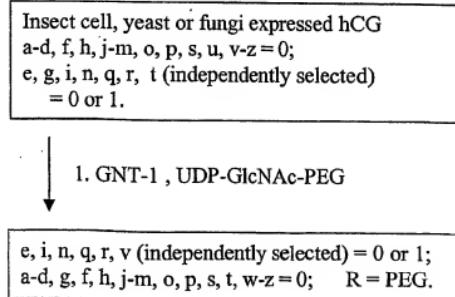


FIG. 55G

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CHO, BHK, 293 cells, insect cell or
 Vero expressed hCG
 a-g, n, q = 1; h = 1 to 3;
 j-m, i, o, p (independently selected) = 0 or 1;
 r-u (independently selected) = 0 or 1; v-z = 0

1. CMP-SA-PEG, ST3Gal3

a-g, n, q = 1; h = 1 to 3;
 i, o (independently selected) = 0 or 1;
 r-u (independently selected) = 0 to 1;
 j-m, p, z (independently selected) = 0 or 1;
 R = PEG; v-y = 0.

FIG. 55H

CHO, BHK, 293 cells, Vero expressed hCG
 a-g, n, q = 1; h = 1 to 3;
 j-m, i, o, p (independently selected) = 0 or 1;
 r-u (independently selected) = 0 or 1; v-z = 0

1. CMP-SA-PEG, α 2,8-ST

a-g, n, q = 1; h = 1 to 3;
 i, o, p (independently selected) = 0 or 1;
 r-u (independently selected) = 0 to 1;
 j-m (independently selected) = 0 to 2;
 v-y (independently selected) = 1, when j-m
 (independently selected) is 2; R = PEG; z = 0.

FIG. 55I

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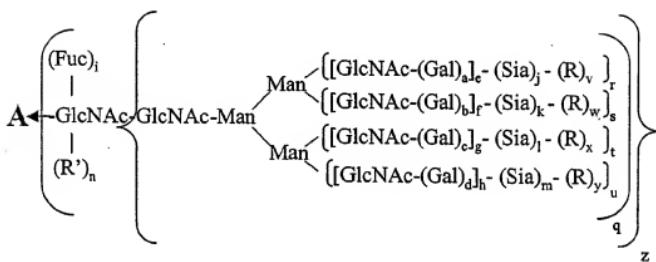
CHO, BHK, 293 cells, Vero expressed hCG
a-g, n, q = 1; h = 1 to 3;
j-m, i, o, p (independently selected) = 0 or 1;
r-u (independently selected) = 0 to 1; v-z = 0

1. CMP-SA, poly- α 2,8-ST

a-i, j-q, r-u, (independently selected) = 0 or 1;
v-z (independently selected) = 0-100; R = Sia.

FIG. 55J

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a-d, i, n, q-u, z (independently selected) = 0 or 1.

e-h (independently selected) = 0 to 6.

j-m (independently selected) = 0 to 100.

v-y = 0 to 100;

R = mannose, mannose-6-phosphate and mannose, polymer.

FIG. 56A

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CHO, BHK, 293 cells, insect cells, Vero expressed and secreted alpha-galactosidase
 a-h, i-m, q-u (independently selected) = 0 or 1;
 $z = 1$; n, v-y = 0; and when a-n = 0, then r-u (independently selected) = 0 or 1; v-y (independently selected) = 0-100;
 R = mannose or mannose with mannose-6-phosphate.

↓

1. Endo-H
2. Galactosyltransferase, UDP-Gal-PEG-transferrin

a-h, i-m, q-u (independently selected) = 0 or 1;
 n, v-y = 0; $z = 1$; and when $z = 0$ and q = 1,
 then n (independently selected) = 0 or 1;
 R' = Gal-PEG-transferrin.

FIG. 56B

CHO, BHK, 293 cells, Insect cells,
 Vero expressed and secreted alpha-galactosidase
 a-h, i-m, q-u (independently selected) = 0 or 1; $z = 1$; n, v-y = 0; and when a-n = 0, then r-u (independently selected) = 0 or 1; v-y (independently selected) = 0-100;
 R = mannose or mannose with mannose-6-phosphate.

↓

1. Sialidase
2. CMP-SA-linker-Mannose-6-phosphate

↓

ST3Gal3

a-h, i-m, q-u, v-y (independently selected) = 0 or 1;
 $n = 0$; $z = 1$; R = mannose-6-phosphate; and when a-n = 0, then r-u (independently selected) = 0 or 1;
 v-y (independently selected) = 0-100;
 R = mannose or mannose with mannose-6-phosphate.

FIG. 56C

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NSO expressed alpha-galactosidase.

a-d, i-m, q-u (independently selected) = 0 or 1;

e-h = 1; v-y = 0;

Sia (independently selected) = Sia or Gal.

1. Sialidase and α -galactosidase
2. Galactosyltransferase, UDP-Gal
3. CMP-SA-linker-mannose-6-phosphate
sialyltransferase

a-d, i-m, q-u (independently selected) = 0 or 1; e-h = 1;

v-y (independently selected) = 1, when j-m (independently selected) is 1; R = mannose-6 phosphate

FIG. 56D

CHO, BHK, 293 cells, Insect cells, Vero expressed and secreted alpha-galactosidase

a-h, i-m, q-u (independently selected) = 0 or 1; z = 1;

n, v-y = 0; and when a-n = 0, then r-u (independently selected) = 0 or 1; v-y (independently selected) = 0-100;

R = mannose or mannose with mannose-6-phosphate.

1. Sialidase
2. CMP-SA-PEG, sialyltransferase

a-h, i-m, q-u, v-y (independently selected) = 0 or 1; n = 0; z = 1; R = PEG; and when a-n = 0, then r-u (independently selected) = 0 or 1; v-y = 0-100; R = mannose or mannose with mannose-6-phosphate.

= 1; R = PEG; and when a-n = 0, then r-u (independently selected) = 0 or 1; v-y = 0-100; R = mannose or mannose with mannose-6-phosphate.

FIG. 56E

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CHO, BHK, 293 cells, Insect cells, Vero, yeast, fungi
expressed alpha-galactosidase.
a-i, v-y = 0; q (independently selected) = 0 or 1; z = 1;
r-u (independently selected) = 0 or 1;
j-m (independently selected) = 0-100;
Sia = mannose or mannose with mannose-6-phosphate.

↓ 1. mannosyltransferase,
GDP-mannose-linker-ApoE

a-i = 0; q (independently selected) = 0 or 1; z = 1;
r-u (independently selected) = 0 or 1;
j-m (independently selected) = 0-100;
Sia = mannose or mannose with mannose-6-phosphate;
v-y (independently selected) = 0 or 1;
R = mannose-linker-ApoE.

FIG. 56F

CHO, BHK, 293 cells, Insect cells, Vero, yeast,
fungi expressed alpha-galactosidase.
a-i, v-y = 0; q (independently selected) = 0 or 1; z = 1;
r-u (independently selected) = 0 or 1;
j-m (independently selected) = 0-100;
Sia = mannose or mannose with mannose-6-phosphate.

↓ 1. endo-H
2. galactosyltransferase,
UDP-Gal-linker-alpha2-macroglobulin

a-m, r-z = 0; n, q (independently selected) = 0 or 1;
R' = galactose-linker-alpha2-macroglobulin.

FIG. 56G

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Insect cell, yeast, fungi expressed
alpha-galactosidase.
a-d, f, h, j-m, s, u, v-y = 0;
e, g, i, q, r, t (independently selected) = 0 or 1.

↓
1. GNT-1,
UDP-GlcNAc-PEG-mannose-6-phosphate

e, i, q, r, v (independently selected) = 0 or 1;
a-d, f-h, j-n, s-u, w-y = 0; z = 1;
R = PEG-mannose-6-phosphate.

FIG. 56H

Insect cell, yeast, fungi expressed
alpha-galactosidase.
a-d, f, h, j-m, s, u, v-y = 0;
e, g, i, q, r, t (independently selected) = 0 or 1.

↓
1. GNT-1, UDP-GlcNAc
2. galactosyltransferase,
↓ UDP-Gal-PEG-transferrin

a, e, i, q, r, v (independently selected) = 0 or 1;
b-d, f-h, j-n, s-u, w-y = 0; z = 1;
R = PEG-transferrin.

FIG. 56I

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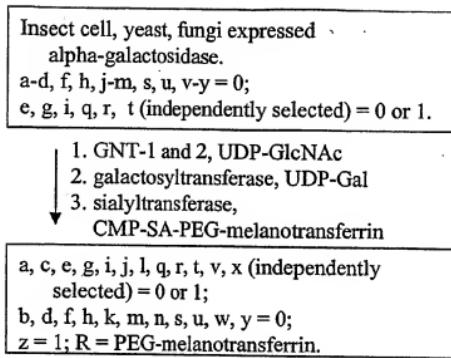
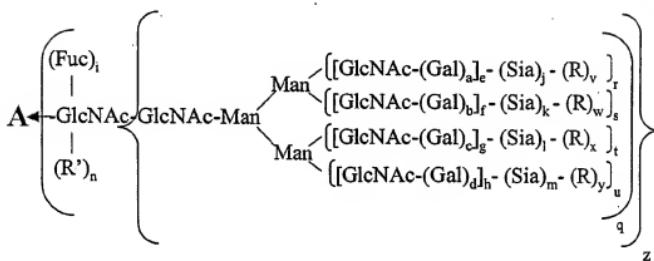
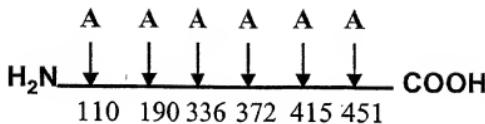


FIG. 56J

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a-d, i, n, q-u, z (independently selected) = 0 or 1.

e-h (independently selected) = 0 to 6.

j-m (independently selected) = 0 to 100.

v-y = 0 to 100;

R = mannose, mannose-6-phosphate and mannose, polymer.

FIG. 57A

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CHO, BHK, 293 cells, Insect cells, Vero expressed and secreted alpha-iduronidase
 a-h, i-m, q-u (independently selected) = 0 or 1; z = 1;
 n, v-y = 0; and when a-n = 0, then r-u (independently selected) = 0 or 1; v-y (independently selected) = 0-100;
 R = mannose or mannose with mannose-6-phosphate.

↓
 1. Endo-H
 2. Galactosyltransferase, UDP-Gal-PEG-transferrin

a-h, i-m, q-u (independently selected) = 0 or 1;
 n, v-y = 0; z = 1; and when z = 0 and q = 1, then n (independently selected) = 0 or 1; R' = Gal-PEG-transferrin.

FIG. 57B

CHO, BHK, 293 cells, Insect cells, Vero expressed and secreted alpha-iduronidase
 a-h, i-m, q-u (independently selected) = 0 or 1; z = 1;
 n, v-y = 0; and when a-n = 0, then r-u (independently selected) = 0 or 1; v-y (independently selected) = 0-100;
 R = mannose or mannose with mannose-6-phosphate.

↓
 1. Sialidase
 2. CMP-SA-linker-Mannose-6-phosphate ST3Gal3

a-h, i-m, q-u, v-y (independently selected) = 0 or 1; n = 0;
 z = 1; R = mannose-6-phosphate; and when a-n = 0,
 then r-u (independently selected) = 0 or 1;
 v-y (independently selected) = 0-100;
 R = mannose or mannose with mannose-6-phosphate.

FIG. 57C

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NSO expressed alpha-iduronidase.

a-d, i-m, q-u (independently selected) = 0 or 1; e-h = 1;
 v-y = 0; Sia (independently selected) = Sia or Gal.

1. Sialidase and α -galactosidase
2. Galactosyltransferase, UDP-Gal
3. CMP-SA-linker-mannose-6-phosphate sialyltransferase

a-d, i-m, q-u (independently selected) = 0 or 1;
 e-h = 1; v-y (independently selected) = 1,
 when j-m (independently selected) is 1;
 R = mannose-6 phosphate

FIG. 57D

CHO, BHK, 293 cells, Insect cells, Vero expressed
and secreted alpha-iduronidase

a-h, i-m, q-u (independently selected) = 0 or 1; z = 1;
 n, v-y = 0; and when a-n = 0, then r-u (independently
 selected) = 0 or 1; v-y (independently selected) = 0-100;
 R = mannose or mannose with mannose-6-phosphate.

1. Sialidase
2. CMP-SA-PEG, sialyltransferase

a-h, i-m, q-u, v-y (independently selected) = 0 or 1; n = 0;
 z = 1; R = PEG; and when a-n = 0, then r-u
 (independently selected) = 0 or 1; v-y = 0-100;
 R = mannose or mannose with mannose-6-phosphate.

FIG. 57E

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CHO, BHK, 293 cells, Insect cells, Vero, yeast, fungi
expressed alpha-iduronidase.

a-i, v-y = 0; q (independently selected) = 0 or 1; z = 1;

r-u (independently selected) = 0 or 1;

j-m (independently selected) = 0-100;

Sia = mannose or mannose with mannose-6-phosphate.

↓
1. mannosyltransferase,
GDP-mannose-linker-ApoE

a-i = 0; q (independently selected) = 0 or 1; z = 1;
r-u (independently selected) = 0 or 1; j-m (independently selected) = 0-100;

Sia = mannose or mannose with mannose-6-phosphate;

v-y (independently selected) = 0 or 1;

R = mannose-linker-ApoE.

FIG. 57F

CHO, BHK, 293 cells, Insect cells, Vero, yeast, fungi
expressed alpha-iduronidase.

a-i, v-y = 0; q (independently selected) = 0 or 1;

z = 1; r-u (independently selected) = 0 or 1;

j-m (independently selected) = 0-100;

Sia = mannose or mannose with mannose-6-phosphate.

↓
1. endo-H
2. galactosyltransferase,
UDP-Gal-linker-alpha2-macroglobulin

a-m, r-z = 0; n, q (independently selected) = 0 or 1;

R' = galactose-linker-alpha2-macroglobulin.

FIG. 57G

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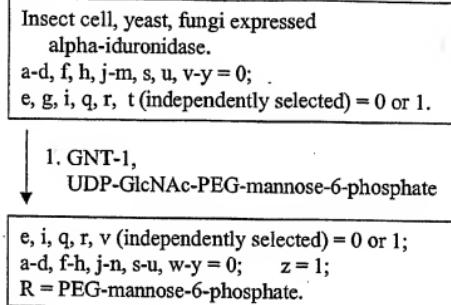


FIG. 57H

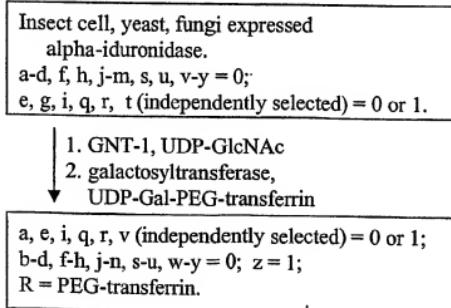


FIG. 57I

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Insect cell, yeast, fungi expressed
alpha-iduronidase.
a-d, f, h, j-m, s, u, v-y = 0;
e, g, i, q, r, t (independently selected) = 0 or 1.

↓

1. GNT-1 and 2, UDP-GlcNAc
2. galactosyltransferase, UDP-Gal
3. sialyltransferase,
CMP-SA-PEG-melanotransferrin

a, c, e, g, i, j, l, q, r, t, v, x
(independently selected) = 0 or 1;
b, d, f, h, k, m, n, s, u, w, y = 0; z = 1;
R = PEG-melanotransferrin.

FIG. 57J

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FIG. 58A

ACCCCCCTGGGCCCTGCCAGCTCCCTGCCAGAGCTTCTGCTCAAT
 GCTTAGAGCAAGTGAGGAAGATCCAGGGCGATGGCGCAGCGCTCCAG
 GAGAAGCTGTGCCACCTACAAGCTGTGCCACCCGAGGAGCTGGT
 GCTGCTCGGACACTCTCTGGCATCCCTGGCTCCCTGAGCAGCTG
 CCCCAGCCAGGCCCTGCAGCTGGCAGGCTGCTTGAGCCAACCTCATA
 GCGGCCTTCTACCAAGGGGCTCTGCAGGCCCTGGAAGGGATCT
 CCCCCGAGTTGGGTCCCACCTTGGACACACTGCAGCTGGACGTCGCCG
 ACTTTGCCACCAACCATCTGGCAGCAGATGGAAGAACTGGGAATGGCC
 CCTGCCCTGCAGCCCACCCAGGGTGCATGCCGCCCTCGCCTCTGCT
 TTCCAGCGCCGGGCAGGAGGGGCTCTGGTTGCCCTCCATCTGAGAG
 CTTCTGGAGGTGTCGTACCGCGTTACGCCACCTGCCAGCCCTG
 A

FIG. 58B

Thr Pro Leu Gly Pro Ala Ser Ser Leu Pro Gln Ser Phe Leu Leu Lys Cys Leu Glu
 Gln Val Arg Lys Ile Gin Gly Asp Gly Ala Ala Leu Gln Glu Lys Leu Cys Ala Thr
 Tyr Lys Leu Cys His Pro Glu Glu Leu Val Leu Leu Gly His Ser Leu Gly Ile Pro
 Trp Ala Pro Leu Ser Ser Cys Pro Ser Gln Ala Leu Gln Leu Ala Gly Cys Leu Ser
 Gln Leu His Ser Gly Leu Phe Leu Tyr Gln Gly Leu Leu Gln Ala Leu Glu Gly Ile
 Ser Pro Glu Leu Gly Pro Thr Leu Asp Thr Leu Gln Leu Asp Val Ala Asp Phe
 Ala Thr Thr Ile Trp Gln Gln Met Glu Glu Leu Gly Met Ala Pro Ala Leu Gln Pro
 Thr Gln Gly Ala Met Pro Ala Phe Ala Ser Ala Phe Gln Arg Arg Ala Gly Gly Val
 Leu Val Ala Ser His Leu Gln Ser Phe Leu Glu Val Ser Tyr Arg Val Leu Arg His
 Leu Ala Gln Pro

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FIG. 59A

GC GCC TCT TAT GT ACC CAC AAAA AT CT ATT T CAAA AAG TT GCT CTA
AGA AT A TAG T AT CA AG TT A AG T AAA A GT CA AT AG C TT T A ATT T A
ATT T T A ATT GT T T T A T C ATT C TT GCA AT A A A A C AT TA A C T T T A T
ACT T T T A ATT T A AT GT AT AG A AT AG A G A T A C A T A G G A T A T G T A A A
TAG A T A C A C A G T G T A T A G T G A T T A A A T A T A A T G G G A G A T T C A A T C
A G A A A A A G T T C T A A A A G G C T C T G G G G T A A A A G A G G A A G G A A A C
A A T A T G A A A A A A T G T G G T G A G A A A A C A G C T G A A A A C C A T G T A
A A G A G T G T A A A A G A A G C A A A A G G A A G A G T A G A A A A G T A C A C A C A G G
G G C A T T G G A A A A T G T A A A C A G G A T A T G T C C T A T T A A G G C T A G G C
A C A A A G C A A G G T C T C A G A G A A C C T G G A G C C T A A G G T T A G G C T C A C
C C A T T C A A C C A G T C T A G C A G C A T C T G C A A C A T C T C A A T G G C T T G A
C C T T G C T T A C T G G T G G C C C T C C T G G T G C T C A G C T G C A A G T C A A G C T
G C T C G T G G G C T G T G A T C T G C C T C A A A C C C A C A G C C T G G G T A G C A G G
A G G A C C T T G A T G C T C T G C A C A G A T G A G G G A A T C T C T T T C T C
T G C T T G A A G G A C A G A C A T G A C T T G G A T T T C C C A C C C C A G G G A G G A T T T G G
C A A C C A G G T C C A A A A G G C T G A A A C C A T C C C T G T C C C T C A T G A G A T G A
T C C A G C A G A T C T C A A T C T C T C A G C A C A A A G G A C T C A T C T G C T G C T T
G G G A T G A G A C C C T C C T A G A C A A A T T C A C A C T G A A C T C T A C C A G C A G
C T G A A T G A C C T G G A A G C C T G T G A T A C A G G G G G T G G G G G T G A C A G A
G A C T C C C T G A T G A A G G A G G A C T C C A T T C T G G C T G T G A G G G A A A T A C T
T C C A A G A A T C A C T C T C T A T C T G A A A G A G A A G A A A T A C A G C C C T T G T
G C C T G G G A G G T T G C A G A G C A G A A A T C A T G A G A T C T T T T C T T G T C A
A C A A A C T T G C A A G A A G T T A A G A A G T A A G G A A T G A A A A C T G G T T C A
A C A T G G A A A T G A T T T C A T T G A T T C G T A T G C C A G C T C A C C T T T T A T G
A T C T G C C A T T C C A A A G A C T C A T G T T T C T G C T A T G A C C A T G A C A C G A T T
T A A A T C T T T C A A T G T T T T A G G A G T A T T A A T C A A C A T T G T A T T C A G
C T C T T A A G G C A C T A G T C C C T T A C A G A G G A C C A T G C T G A C T G A T C C A T T
A T C T A T T T A A T A T T T T A A A T A T T A T T T A A C T A T T T A T A A A A C
A A C T T A T T T T G T T C A T A T T A T G T C A T G T G C A C C T T T G C A C A G T G G T T A
A T G T A A T A A A A T G T G T T C T T G T A T T T G T A A A T T T A T T T G T G T G T T
C A T T G A A C T T T G C T A T G G A A C T T T G T A C T T G T T T A T T C T T T A A A A T G
A A A T T C C A A G C C T A A T T G T G C A A C C T G A T T A C A G A A T A A C T G G T A C A
C T T C A T T T G T C C A T A T T A T T C C A A G A T A T A A G T A A A A A A A A C
T T T C T G T A A A C C A A G T T G T A T G T G T A C T C A A G A T A A C A G G G T G A A C C
T A A C A A A T A C A A T T C T G C T C T C T G T G T A T T T G A T T T T G T A T G A A A A
A A A C T A A A A A T G G T A A T C A T A C T T A A T T C A G G T A T G G T A A T G G T
A T G A A G A G A A G A A G G A A C G

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FIG. 59B

Met Ala Leu Thr Phe Ala Leu Leu Val Ala Leu Leu Val Leu Ser Cys Lys Ser Ser Cys Ser Val Gly Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser Leu Arg Ser Lys Glu

FIG. 59C

ATGGCCCTCCTGTTCCCTCTACTGGCAGCCCTAGTGATGACCAGCTAT
AGCCCTGTTGGATCTCTGGCTGTGATCTGCCTCAGAACCATGGCTA
CTTAGCAGGAACACCTTGGTGTCTGCACCAATGAGGAGAACATCTCC
CCTTCTTGTGTCCTCAAGGACAGAAAGAGACTTCAGGTTCCCCCAGGAG
ATGGTAAAAGGGAGCCAGTTGCAGAAGGCCATGTCATGTCATGTCCT
CCATGAGATGCTGCAGCAGATCTCAGCCTCTTCACACAGAGCGCTC
CTCTGCTGCCCTGAAACATGACCCCTCTAGACCAACTCCACACTGGACT
TCATCAGCAACTGCAACACCTGGAGACCTGCTTGCTGCAGGTAGTGG
GAGAAGGAGAAATCTGCTGGGCAATTAGCAGCCCTGCACTGACCTTG
AGGAGGTACTTCCAGGGAAATCGTGTCTACCTGAAAGAGAAAGAAATA
CAGCGACTGTGCCCTGGGAAGTTGTCAAATGGAATCATGAAATCCT
TGTTCTTATCAACAAACATGCAAGAAAGACTGAGAAGTAAAGATAGA
GACCTGGGCTCATCTTG

FIG. 59D

Met Ala Leu Leu Phe Pro Leu Leu Ala Ala Leu Val Met Thr Ser Tyr Ser Pro Val Gly Ser Leu Gly Cys Asp Leu Pro Gln Asn His Gly Leu Leu Ser Arg Asn Thr Leu Val Leu Leu His Gln Met Arg Arg Ile Ser Pro Phe Leu Cys Leu Lys Asp Arg Arg Asp Phe Arg Phe Pro Gln Glu Met Val Lys Gly Ser Gln Leu Gln Lys Ala His Val Met Ser Val Leu His Glu Met Leu Gln Gln Ile Phe Ser Leu Phe His Thr Glu Arg Ser Ser Ala Ala Trp Asn Met Thr Leu Leu Asp Gln Leu His Thr Gly Leu His Gln Gln Leu Gln His Leu Glu Thr Cys Leu Leu Gln Val Val Gly Glu Gly Glu Ser Ala Ile Ile Ser Pro Ala Leu Thr Leu Arg Arg Tyr Phe Gln Gly Ile Arg Val Tyr Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp Glu Val Val Arg Met Glu Ile Met Lys Ser Leu Phe Leu Ser Thr Asn Met Gln Glu Arg Leu Arg Ser Lys Asp Arg Asp Leu Gly Ser Ser

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FIG. 60A

ATGACCAACAAGTGTCTCCAAAATGCTCTCTGTTGTGCTTCTCC
 ACTACAGCTTTCCATGAGCTACAACATTGCTTGATTCTACAAAGA
 AGCAGCAATTTCAGTGTCAAGCCTCTGTGGCAATTGAATGGGAG
 GCTTGAATATTGCTCAAGGACAGGGATGAACCTTGACATCCCTGAGG
 AGATTAAGCAGCTGCAGCAGTCCAGAAGGAGGACGCCGATTGACC
 ATCTATGAGATGCTCCAGAACATCTTGCTATTTCAGACAAGATTCA
 TCTAGCACTGGCTGGAATGAGACTATTGTTGAGAACCTCTGGCTAA
 TGTCTATCATCAGATAAACATCTGAAAGACAGTCCCTGGAAAGAAAAAC
 TGGAGAAAGAAGATTTACCCAGGGAAAACATCATGAGCAGTCTGCAC
 CTGAAAAGATAATATGGGAGGATTCTGCATTACCTGAAGGCCAAGGA
 GTACAGTCAGTGTGCCCTGGACCATAGTCAGAGTGGAAATCTTAAGGA
 ACTTTACTTCATTAACAGACTTACAGGTTACCTCGAAACTGAAGAT
 CTCCTAGCCTGCCCCCTGGACTGGACAATTGCTTCAAGCATCTTC
 AACCAAGCAGATGCTGTTAAGTGAATGGCTAATGTAATGCAAAT
 GAAAGGACACTAGAAGATTTGAAATTTTATTAAATTATGAGTTATT
 TTTATTTAT TTAAATTATTTGGAAAATAAATTATTTGGTGC

FIG. 60B

Met Thr Asn Lys Cys Leu Leu Gln Ile Ala Leu Leu Leu Cys Phe Ser Thr Thr Ala
 Leu Ser Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
 Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly ArgLeu Glu Tyr Cys Leu Lys Asp
 Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln Gln Phe Gln Lys Glu
 Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln Asn Ile Phe Ala Ile Phe Arg Gln
 Asp Ser Ser Ser Thr Gly Trp Asn Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val
 Tyr His Gln Ile Asn His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp
 Phe Thr Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg Ile
 Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr Ile Val Arg Val
 Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu Thr Gly Tyr Leu Arg Asn

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FIG. 61A

ATGGTCTCCCAGGCCCTCAGGCTCCTCTGCCCTCTGCTTGGCTTCAG
GGCTGCCTGGCTGCAGTCTCGTAACCCAGGAGGAAGCCCACGGCGT
CCTGCACCGGGCGCCGGCGCGCAACCGCGTCTGGAGGAGCTGCGGC
CGGGCTCCCTGGAGAGGGAGTGCAAGGAGGAGCAGTGTCTTCGA
GGAGGCCCGGGAGATCTCAAGGACCGGGAGAGGACGAAGCTGTC
TGGATTCTTACAGTGTGGGACCAAGTGTGCCCAAGTCCATGCCA
GAATGGGGCTCTGCAGGACCAAGCTCCAGTCTATATCTGCTCT
GCCTCCCTGCCCTCGAGGGCCGGAAGTGTGAGACGCACAAGGATGAC
CAGCTGATCTGTGTGAACGAGAACGGCGGTGTGAGCAGTACTGCAG
TGACACACGGGACCAAGCGCTCTGCGGTGCCACGAGGGTACT
CTCTGCTGGCAGACGGGGTGTCTGCACACCCACAGTTGAATATCCA
TGTGGAAAAATACCTATTCTAGAAAAAAGAAATGCCAGCAACCCCA
AGGCCAATTGTGGGGCAAGGTGTGCCCAAAGGGGAGTGTCCA
TGGCAGGTCTGTTGGTGAATGGAGCTCAGTTGTGTGGGGGAC
CCTGATCAACACCATCTGGGTGGTCTCGCGGCCACTGTTGACAA
AATCAAGAACTGGAGGAACCTGATCGCGGTGCTGGCGAGCACGAC
CTCAGCGAGCACGACGGGATGAGCAGAGCCGCGGGTGGCGCAGG
TCATCATCCCCAGCACGTCAGTCCCAGGCCACCAACCAGACATC
GCGCTGCTCGCCCTGCACCCAGGGTGGTCTCAGTACCATGTGGT
CCCCCTGCTGCTGCCGAACGGACGTTCTCTGAGAGGACGCTGGCCT
GTGCGCTCTCATGGTCAGCGGCTGGGCCAGCTGCTGGACCGTGG
GCCACGGCCCTGGAGCTCATGGTCACAGTGCCTGGCTGATGA
CCCAGGACTGCCTGCAGCAGTCACGGAAAGGTGGAGACTCCCCAAAT
ATCACGGAGTACATGTTCTGTGCCGGTACTCGGATGGCAGCAAGGA
CTCCCTGCAAGGGGGACAGTGGAGGCCACATGCCACCCACTACCGGG
GCACGTGGTACCTGACGGGCATCGTCAGCTGGGCCAGGGTCTCCAGTACATCGA
ACCGTGGGCCACTTGGGGTGTACACCAGGGTCTCCAGTACATCGA
GTGGCTGAAAAGCTCATCGCCTCAGAGCCACGCCAGGAGTCCTCC
TGCAGCCCCATTCCCC

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FIG. 61B

Met Val Ser Gln Ala Leu Arg Leu Leu Cys Leu Leu Gly Leu Gln Gly Cys Leu Ala Ala Val Phe Val Thr Gln Glu Glu Ala His Gly Val Leu His Arg Arg Arg Arg Ala Asn Ala Phe Leu Glu Glu Leu Arg Pro Gly Ser Leu Glu Arg Glu Cys Lys Glu Glu Gln Cys Ser Phe Glu Glu Ala Arg Glu Ile Phe Lys Asp Ala Glu Arg Thr Lys Leu Phe Trp Ile Ser Tyr Ser Asp Gly Asp Gln Cys Ala Ser Ser Pro Cys Gln Asn Gly Gly Ser Cys Lys Asp Gln Leu Gln Ser Tyr Ile Cys Phe Cys Leu Pro Ala Phe Glu Gly Arg Asn Cys Glu Thr His Lys Asp Asp Gln Leu Ile Cys Val Asn Glu Asn Gly Gly Cys Glu Gln Tyr Cys Ser Asp His Thr Gly Thr Lys Arg Ser Cys Arg Cys His Glu Gly Tyr Ser Leu Leu Ala Asp Gly Val Ser Cys Thr Pro Thr Val Glu Tyr Pro Cys Gly Lys Ile Pro Ile Leu Glu Lys Arg Asn Ala Ser Lys Pro Gln Gly Arg Ile Val Gly Gly Lys Val Cys Pro Lys Gly Glu Cys Pro Trp Gln Val Leu Leu Val Asn Gly Ala Gln Leu Cys Gly Gly Thr Leu Ile Asn Thr Ile Trp Val Val Ser Ala Ala His Cys Phe Asp Lys Ile Lys Asn Trp Arg Asn Leu Ile Ala Val Leu Gly Glu His Asp Leu Ser Glu His Asp Gly Asp Glu Gln Ser Arg Arg Val Ala Gln Val Ile Ile Pro Ser Thr Tyr Val Pro Gly Thr Thr Asn His Asp Ile Ala Leu Leu Arg Leu His Gln Pro Val Val Leu Thr Asp His Val Val Pro Leu Cys Leu Pro Glu Arg Thr Phe Ser Glu Arg Thr Leu Ala Phe Val Arg Phe Ser Leu Val Ser Gly Trp Gly Gln Leu Leu Asp Arg Gly Ala Thr Ala Leu Glu Leu Met Val Leu Asn Val Pro Arg Leu Met Thr Gln Asp Cys Leu Gln Gln Ser Arg Lys Val Gly Asp Ser Pro Asn Ile Thr Glu Tyr Met Phe Cys Ala Gly Tyr Ser Asp Gly Ser Lys Asp Ser Cys Lys Gly Asp Ser Gly Gly Pro His Ala Thr His Tyr Arg Gly Thr Trp Tyr Leu Thr Gly Ile Val Ser Trp Gly Gln Gly Cys Ala Thr Val Gly His Phe Gly Val Tyr Thr Arg Val Ser Gln Tyr Ile Glu Trp Leu Gln Lys Leu Met Arg Ser Glu Pro Arg Pro Gly Val Leu Leu Arg Ala Pro Phe Pro

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FIG. 62A

ATGCAGCGCGTGAACATGATCATGGCAGAACATACCAAGCCTCATCAC
CATCTGCCTTITAGGATATCTACTCAGTGTGAATGTACAGTTTCTT
GATCATGAAAACGCCAACAAATTCTGAATCGGCCAAAGAGGTATAA
TTCAGGTAATTGGAAGAGAGTTGTCAGGGAACCTTGAGAGAGAAT
GTATGGAAGAAAAGTGTAGTTGAAAGAACACCAGAGAACAGTTTGAA
AACACTGAAAAGACAACGTAAATTGGAAGCAGTATGTTGATGGAGA
TCAGTGTGAGTCCAATCCATGTTAAATGGCGCAGTTGCAAGGATG
ACATTAATTCTCATGTAATGTTGTCCTTGTGATTGAAAGGAAAGA
ACTGTGAATTAGATGTAACATGTAACATTAAGAACATGGCAGATGCGAG
CAGTTTGAAAAATAGTGTGATAACAAAGGTGTTGCTCTGTACT
GAGGGATATGCACTTGAGAAAACAGAACAGTCTGTGAACCAGACT
GCCATTCCATGTGGAAGAGTTCTGTTCAACAAACTCTAACGCTCAC
CCGTGCTGAGGCTGTTCTGTATGTGGACTATGTAACATCTACTGA
AGCTGAAACCATTTGATAACATCACTCAAGGCACCCAAATCATTTA
ATGACTTCACTCGGGTTGTTGGAGAACAGATGCCAACCCAGGTCAA
TTCCTTGGCAGGTGTTGAAATGGTAAAGTTGATGCATTCTGTGGA
GGCTATCGTTAATGAAAATGGATTGTAACTGCTGCCCACGTGTT
GAAACTGGTGTAAAATACAGTTGTCGAGGTGAACATAATTGAA
GGAGACAGAACATACAGAGCAAAGCAGAACATGTGATTGAGCAATT
ATTCCCTACCAACAACTACAATGCACTTAAATAAGTACAACCATGA
CATTGCCCTTCTGGAACTGGACGAACCCCTAGTGCTAAACAGCTACG
TTACACCTATTGCAATTGCTGACAAGGAATAACAGAACATCTCCTCA
AATTGGATCTGGCTATGTAAGTGGCTGGCAAGAGTCTTCCACAAA
GGGAGATCAGCTTATGTTCTCAGTACCTTAGAGTTCCACTGTTGAC
CGAGCACCATGTCCTCGATCTACAAAGTTACCCATCTATAACACAT
GTTCTGTGCTGGCTTCCATGAAGGAGGTAGAGATTCAATGTCAGGAG
ATAGTGGGGGACCCATGTTACTGAAGTGGAAAGGGACCAGTTCTTA
ACTGGAATTATTAGCTGGGGTGAAGAGTGTGCAATGAAAGCAAATA
TGGAAATATACCAAGGTATCCCGGTATGTCAACTGGATTAAAGGAAA
AAACAAAGCTCACTTAATGAAAGATGGATTCCAAGGTTAATTCAATT
GGAATTGAAAATTAACAG

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FIG. 62B

Met Gln Arg Val Asn Met Ile Met Ala Glu Ser Pro Ser Leu Ile Thr Ile Cys Leu
Leu Gly Tyr Leu Leu Ser Ala Glu Cys Thr Val Phe Leu Asp His Glu Asn Ala
Asn Lys Ile Leu Asn Arg Pro Lys Arg Tyr Asn Ser Gly Lys Leu Glu Glu Phe
Val Gln Gly Asn Leu Glu Arg Glu Cys Met Glu Glu Lys Cys Ser Phe Glu Glu
Pro Arg Glu Val Phe Glu Asn Thr Glu Lys Thr Thr Glu Phe Trp Lys Gln Tyr
Val Asp Gly Asp Gln Cys Glu Ser Asn Pro Cys Leu Asn Gly Gly Ser Cys Lys
Asp Asp Ile Asn Ser Tyr Glu Cys Trp Cys Pro Phe Gly Phe Glu Gly Lys Asn
Cys Glu Leu Asp Val Thr Cys Asn Ile Lys Asn Gly Arg Cys Glu Gln Phe Cys
Lys Asn Ser Ala Asp Asn Lys Val Val Cys Ser Cys Thr Glu Gly Tyr Arg Leu
Ala Glu Asn Gln Lys Ser Cys Glu Pro Ala Val Pro Phe Pro Cys Gly Arg Val Ser
Val Ser Gln Thr Ser Lys Leu Thr Arg Ala Glu Ala Val Phe Pro Asp Val Asp Tyr
Val Asn Pro Thr Glu Ala Glu Thr Ile Leu Asp Asn Ile Thr Gln Gly Thr Gln Ser
Phe Asn Asp Phe Thr Arg Val Val Gly Gly Glu Asp Ala Lys Pro Gly Gln Phe
Pro Trp Gln Val Val Leu Asn Gly Lys Val Asp Ala Phe Cys Gly Gly Ser Ile Val
Asn Glu Lys Trp Ile Val Thr Ala Ala His Cys Val Glu Thr Gly Val Lys Ile Thr
Val Val Ala Gly Glu His Asn Ile Glu Glu Thr Glu His Thr Glu Gln Lys Arg Asn
Val Ile Arg Ala Ile Ile Pro His His Asn Tyr Asn Ala Ala Ile Asn Lys Tyr Asn
His Asp Ile Ala Leu Leu Glu Leu Asp Glu Pro Leu Val Leu Asn Ser Tyr Val Thr
Pro Ile Cys Ile Ala Asp Lys Glu Tyr Thr Asn Ile Phe Leu Lys Phe Gly Ser Gly
Tyr Val Ser Gly Trp Ala Arg Val Phe His Lys Gly Arg Ser Ala Leu Val Leu Gln
Tyr Leu Arg Val Pro Leu Val Asp Arg Ala Thr Cys Leu Arg Ser Thr Lys Phe
Thr Ile Tyr Asn Asn Met Phe Cys Ala Gly Phe His Glu Gly Gly Arg Asp Ser
Cys Gln Gly Asp Ser Gly Gly Pro His Val Thr Glu Val Glu Gly Thr Ser Phe Leu
Thr Gly Ile Ile Ser Trp Gly Glu Glu Cys Ala Met Lys Gly Lys Tyr Gly Ile Tyr
Thr Lys Val Ser Arg Tyr Val Asn Trp Ile Lys Glu Lys Thr Lys Leu Thr

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FIG. 63A

ATGGATTACTACAGAAAATATGCAGCTATCTTCTGGTCACATTGTCG
GTGTTCTGCATGTTCTCATTCCGCTCTGATGTGCAGGATTGCCA
GAATGCACGCTACAGGAAAACCCATTCTCTCCAGCCGGGTGCCCC
AATACTTCAGTGCATGGGCTGCTGCTCTAGAGCATATCCCACCTCC
ACTAAGGTCCAAGAAGACGATGTTGGTCCAAAAGAACGTACCTCAG
AGTCCACTTGCTGTAGCTAAATCATATAACAGGGTCACAGTAATG
GGGGGTTCAAAAGTGGAGAACCAACACGGCGTGCCACTGCAGTACTTG
TTATTATCACAAATCTTAAATGTTTACCAAGTGTGTTAGTGTATGGCTTT
GCTGATTTCTGGAATGGAAAATTAAAGTGTGTTAGTGTATGGCTTT
GTGAGATAAAACTCTCCTTCCCTTACCATACCACTTGACACGCTTC
AAGGATATACTGCAGCTTACTGCCTCCTTATCCTACAGTACAA
TCAGCAGTCTAGTTCTTCAATTGGATGAATAACAGCATTAAGCTTG
TTCCACTGCAAATAAAGCCTTTAAATCATC

FIG. 63B

Met Asp Tyr Tyr Arg Lys Tyr Ala Ala Ile Phe Leu Val Thr Leu Ser Val Phe Leu
His Val Leu His Ser Ala Pro Asp Val Gln Asp Cys Pro Glu Cys Thr Leu Gln Glu
Asn Pro Phe Phe Ser Gln Pro Gly Ala Pro Ile Leu Gln Cys Met Gly Cys Cys Phe
Ser Arg Ala Tyr Pro Thr Pro Leu Arg Ser Lys Lys Thr Met Leu Val Gln Lys Asn
Val Thr Ser Glu Ser Thr Cys Cys Val Ala Lys Ser Tyr Asn Arg Val Thr Val Met
Gly Gly Phe Lys Val Glu Asn His Thr Ala Cys His Cys Ser Thr Cys Tyr Tyr His
Lys Ser

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FIG. 63C

ATGAAGACACTCCAGTTCTTCTGTTGCTGGAAAGCAATC
TGCTGCAATAGCTGTGAGCTGACCAACATCACCATTGCAATAGAGAA
AGAAGAATGTCGTTCTGCATAAGCATCAACACCACCTGGGTGCTG
GCTACTGCTACACCAGGGATCTGGTGTATAAGGACCCAGCCAGGCCC
AAAATCCAGAAAACATGTACCTCAAGGAACTGGTATATGAAACAGT
GAGAGTGCCCGGCTGTGCTCACCATGCAGATTCTTGTATACATACCC
AGTGGCCACCCAGTGTCACTGTGGCAAGTGTGACAGCGACAGCACTG
ATTGTACTGTGCGAGGCCTGGGCCAGCTACTGCTCCTTGGTGAAA
TGAAAGAATAA

FIG. 63D

Met Lys Thr Leu Gln Phe Phe Leu Phe Cys Cys Trp Lys Ala Ile Cys Cys
Asn Ser Cys Glu Leu Thr Asn Ile Thr Ile Ala Ile Glu Lys Glu Glu Cys Arg Phe
Cys Ile Ser Ile Asn Thr Thr Trp Cys Ala Gly Tyr Cys Tyr Thr Arg Asp Leu Val
Tyr Lys Asp Pro Ala Arg Pro Lys Ile Gln Lys Thr Cys Thr Phe Lys Glu Leu Val
Tyr Glu Thr Val Arg Val Pro Gly Cys Ala His His Ala Asp Ser Leu Tyr Thr Tyr
Pro Val Ala Thr Gln Cys His Cys Gly Lys Cys Asp Ser Asp Ser Thr Asp Cys
Thr Val Arg Gly Leu Gly Pro Ser Tyr Cys Ser Phe Gly Met Lys Glu

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FIG. 64A

CCCGGAGCCGGACCGGGGCCACCGCGCCCGCTGCTCCGACACCGC
GCCCCCTGGACAGCCGCCCTCTCCAGGGCCCTGGGGCTGGCCCT
GCACCGCCGAGCTTCCCAGGGATGAGGGCCCCCGGTGTGGTCACCCGG
CGCGCCCCAGGTCGCTGAGGGACCCCGGCCAGGGCGGGAGATGGGG
GTGCACGAATGTCTGCCTGGCTGTGGCTCTCTGTCCCTGCTGTGCG
CTCCCTCTGGGCCCTCCCAGTCCTGGCGCCCCACCCACGCCTCATCTGT
GACAGCCGAGTCCTGGAGAGGTACCTCTGGAGGCCAAGGAGGCCG
AGAATATCACGACGGCTGTGCTGAACACTGCAGCTTGAATGAGAAT
ATCACTGTCCCAGACACCAAAGTTAATTCTATGCCTGGAAGAGGAT
GGAGGTGGGGCAGCAGGCCGTAGAAGTCTGGCAGGGCCTGCCCTG
CTGTGGAAGCTGTCTGCAGGGCCAGGGCCCTGTTGGTCAACTCTCC
CAGCCGTGGAGGCCCTGCACTGCACTGTGGATAAAGCCGTAGTGG
CCTTCGCAAGCCTCACCACTGCTTCGGCTCTGCGAGGCCAGAAGG
AAGCCATCTCCCTCCAGATCGGCCCTCAGCTGCTCCACTCCGAACA
ATCACTGCTGACACTTCCCAAACACTTCCGAGTCTACTCCAATTTC
CTCCGGGAAAGCTGAAGCTGTACACAGGGGAGGCCCTGCAAGGACAG
GGGACAGATGACCAGGTGTGTCACCTGGCATATCCACCAACCTCCC
TCACCAACATTGCTTGTGCCACACCCCTCCCCGCCACTCTGAACCCC
GTCGAGGGCTCTCAGCTCAGGCCAGCCTGTCCCATGGACACTCCA
GTGCCAGCAATGACATCTCAGGGCCAGAGGAACTGTCCAGAGAGC
AACTCTGAGATCTAAGGATGTCACAGGGCCAACCTGAGGGCCAGAG
CAGGAAGCATTCAGAGAGCAGCTTAAACTCAGGGACAGGCCATG
CTGGGAAGACCCCTGAGCTCACTCGGCACCCCTGCAAATTGATGCC
AGGACACGCTTGGAGGGGATTTACCTGTTTCGCACCTACCATCAGG
GACAGGATGACCTGGAGAAACTTAGTGGCAAGCTGTGACTCTCCAG
GTCTCACGGGCATGGCACTCCCTGGTGGCAAGAGCCCCCTGACA
CCGGGGTGGTGGGAACCATGAAGACAGGATGGGGCTGGCCTCTGG
CTCTCATGGGGTCCAAGTTTGTTGATTCACCTCATTGACAAGA
ACTGAAACCACCAAAAAAA

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FIG. 64B

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg Met Glu Val Gly Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Arg Ala Gln Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp Arg

FIG. 65

Ala Pro Pro Arg Leu Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg Met Glu Val Gly Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Gln Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp

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FIG. 66A

ATGTGGCTGCAGAGCCTGCTCTGGCACTGTGGCTGCAGCAT
CTCTGCACCCGCCGCTGCCAGCCCCAGCACCGCAGCCCTGGAGC
ATGTGAATGCCATCCAGGAGGCCGGCTCTCCTGAACCTGAGTAGA
GACACTGCTGAGATGAATGAAACAGTAGAAGTCATCTCAGAAAT
GTTTGACCTCCAGGAGGCCACCTGCCTACAGACCCGCCTGGAGCTGT
ACAAGCAGGGCTCGGGGCAGCCTCACCAAGCTAAGGGCCCTTG
ACCATGATGGCCAGCCACTACAAGCAGCACTGCCTCCAACCCCGGA
AACTTCCGTGCAACCCAGATTATCACCTTGAAGTTCAAAGAGA
ACCTGAAGGACTTCTGCTGTACATCCCCTTGACTGCTGGGAGCCAG
TCCAGGAGTGAA

FIG. 66B

Met Trp Leu Gln Ser Leu Leu Leu Leu Gly Thr Val Ala Cys Ser Ile Ser Ala Pro
Ala Arg Ser Pro Ser Pro Ser Thr Gln Pro Trp Glu His Val Asn Ala Ile Gln Glu
Ala Arg Arg Leu Leu Asn Leu Ser Arg Asp Thr Ala Ala Glu Met Asn Glu Thr
Val Glu Val Ile Ser Gln Met Phe Asp Leu Gln Glu Pro Thr Cys Leu Gln Thr Arg
Leu Glu Leu Tyr Lys Gln Gly Leu Arg Gly Ser Leu Thr Lys Leu Lys Gly Pro
Leu Thr Met Met Ala Ser His Tyr Lys Gln His Cys Pro Pro Thr Pro Glu Thr Ser
Cys Ala Thr Gln Ile Ile Thr Phe Glu Ser Phe Lys Glu Asn Leu Lys Asp Phe Leu
Leu Val Ile Pro Phe Asp Cys Trp Glu Pro Val Gln Glu

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FIG. 67A

ATGAAATATAACAAGTTATCTTGGCTTTCAAGCTCTGCATCGTTTG
GGTCTCTGGCTTACTGCCAGGACCCATATGAAAAGAAGCAGA
AAACCTTAAGAAATATTTAATGCAGGTATTCAAGATGTAGCGGATA
ATGGAACTCTTTCTTAGGCATTGAAGAATTGAAAGAGGAGAGT
GACAGAAAATAATGCAGAGCAAATTGTCTCCCTTACTTCAAAC
TTTAAAAACTTAAAGATGACCAAGAGCATCCAAAAGAGTGTGGAGA
CCATCAAGGAAGACATGAATGTCAGTTCAATAGCAACAAAAG
AAACGAGATGACTTCGAAAAGCTGACTAATTATCGGTAACTGACTT
GAATGTCCAACGCAAAGCAACATGAACTCATCCAAAGTGATGGCTG
AACTGTCGCCAGCAGCTAAACAGGGAAAGCAGAAAAGGAGTCAGAT
GCTGTTCGAGGTGAAAGAGCATCCCAGTAA

FIG. 67B

Met Lys Tyr Thr Ser Tyr Ile Leu Ala Phe Gln Leu Cys Ile Val Leu Gly Ser Leu
Gly Cys Tyr Cys Gln Asp Pro Tyr Val Lys Glu Ala Glu Asn Leu Lys Lys Tyr
Phe Asn Ala Gly His Ser Asp Val Ala Asp Asn Gly Thr Leu Phe Leu Gly Ile
Leu Lys Asn Trp Lys Glu Glu Ser Asp Arg Lys Ile Met Gln Ser Gln Ile Val Ser
Phe Tyr Phe Lys Leu Phe Lys Asn Phe Lys Asp Asp Gln Ser Ile Gln Lys Ser Val
Glu Thr Ile Lys Glu Asp Met Asn Val Lys Phe Phe Asn Ser Asn Lys Lys Lys
Arg Asp Asp Phe Glu Lys Leu Thr Asn Tyr Ser Val Thr Asp Leu Asn Val Gln
Arg Lys Ala Ile His Glu Leu Ile Gln Val Met Ala Glu Leu Ser Pro Ala Ala Lys
Thr Gly Lys Arg Lys Arg Ser Gln Met Leu Phe Arg Gly Arg Arg Ala Ser Gln

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FIG. 68A

CTGGGACAGTGAATCGACAATGCCGTCTCTGTCCTGGGCATCCT
CCTGCTGGCAGGCCTGTGCTGCCCTGGCTCCCTGGCTGAGGA
TCCCAGGGAGATGCTGCCAGAAGACAGATACTCCACCATGATC
AGGATCACCCAAACCTCAACAAGATCACCCCCAACCTGGCTGAGTT
GCCTCAGCTATACCGCCAGCTGGCACACCAGTCCAACAGCACCAA
TATCTTCTCTCCCCAGTGAGCATCGCTACAGCCTTGCAATGCTCTC
CCTGGGACCAAGGCTGACACTCACGATGAAATCCTGGAGGGCCTGA
ATTCACCTCAACCTCACGGAGATCCGGAGGCTCAGATCCATGAAGGCTTC
CAGGAACCTCCGTACCCCTCAACCCAGGCCAGAGCCAGCTCCAGCT
GACCACCGGCAATGGCTGTCCCTCACGGAGGGCTGAAGGCTAGTGG
ATAAGTTTGAGGATGTTAAAAGTTGTAACCACTCAGAACGCTTC
ACTGTCACACTCGGGGACACCGAAGAGGCCAAGAAACAGATCAACG
ATTACGTGGAGAAGGGTACTCAAGGAAAATTGTGGATTGGTCAAG
GAGCTTGACAGAGACACAGTTTGCTCTGGTGAATTACATCTCTT
AAAGGCAAATGGGAGAGACCCCTTGAAAGTCAGGACACCAGGAAG
AGGACTTCAACGTGGACCAAGGTGACCAACCGTGAAGGTGCTATGATG
AAGCGTTAGGCATGTTAACATCCAGCACTGTAAGAAGCTGTCAG
CTGGGTGCTGCTGATGAAATACCTGGCAATGCCACCGCCATCTCT
TCCTGCCTGATGAGGGAAACTACAGCACCTGGAAAATGAAGCTCACC
CACGATATCATACCAAGTTCTGGAAAATGAAGACAGAACGGTCTGC
CAGCTACATTACCCAAACTGTCCATTACTGGAACCTATGATCTGAA
GAGCGTCCTGGGCAACTGGCATCACTAACGGTCTCAGCAATGGGG
CTGACCTCTCGGGGTACAGAGGAGGCACCCCTGAAGCTCTCCAAG
GCCGTGCATAAGGCTGTGCTGACCATCGACGAGAAAGGGACTGAAGC
TGCTGGGCCATGTTTAAGAGGCCATACCCATGCTATCCCCCCCAGA
GGTCAAGTCAACAAACCCCTTGTCTTAAATGATTGAACAAAATAC
CAAGTCTCCCTCTTCACTGGAAAAGGGTGAATCCCACCCAAAAT
AACTGCCTCTCGCTCCTCAACCCCTCCCTCATCCCTGGCCCCCTCC
CTGGATGACATTAAGAAGGGTTGAGCTGG

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FIG. 68B

Met Pro Ser Ser Val Ser Trp Gly Ile Leu Leu Leu Ala Gly Leu Cys Cys Leu Val Pro Val Ser Leu Ala Glu Asp Pro Gln Gly Asp Ala Ala Gln Lys Thr Asp Thr Ser His His Asp Gln Asp His Pro Thr Phe Asn Lys Ile Thr Pro Asn Leu Ala Glu Phe Ala Phe Ser Leu Tyr Arg Gln Leu Ala His Gln Ser Asn Ser Thr Asn Ile Phe Phe Ser Pro Val Ser Ile Ala Thr Ala Phe Ala Met Leu Ser Leu Gly Thr Lys Ala Asp Thr His Asp Glu Ile Leu Glu Gly Leu Asn Phe Asn Leu Thr Glu Ile Pro Glu Ala Gln Ile His Gly Phe Gln Glu Leu Leu Arg Thr Leu Asn Gln Pro Asp Ser Gln Leu Gln Leu Thr Thr Gly Asn Gly Leu Phe Leu Ser Glu Gly Leu Lys Leu Val Asp Lys Phe Leu Glu Asp Val Lys Lys Leu Tyr His Ser Glu Ala Phe Thr Val Asn Phe Gly Asp Thr Glu Glu Ala Lys Lys Gln Ile Asn Asp Tyr Val Glu Lys Gly Thr Gln Gly Lys Ile Val Asp Leu Val Lys Glu Leu Asp Arg Asp Thr Val Phe Ala Leu Val Asn Tyr Ile Phe Phe Lys Gly Lys Trp Glu Arg Pro Phe Glu Val Lys Asp Thr Glu Glu Asp Phe His Val Asp Gln Val Thr Thr Val Lys Val Pro Met Met Lys Arg Leu Gly Met Phe Asn Ile Gln His Cys Lys Lys Leu Ser Ser Trp Val Leu Leu Met Lys Tyr Leu Gly Asn Ala Thr Ala Ile Phe Phe Leu Pro Asp Glu Gly Lys Leu Gln His Leu Glu Asn Glu Leu Thr His Asp Ile Ile Thr Lys Phe Leu Glu Asn Glu Asp Arg Arg Ser Ala Ser Leu His Leu Pro Lys Leu Ser Ile Thr Gly Th Tyr Asp Leu Lys Ser Val Leu Gly Gln Leu Gly Ile Thr Lys Val Phe Ser Asn Gly Ala Asp Leu Ser Gly Val Thr Glu Glu Ala Pro Leu Lys Leu Ser Lys Ala Val His Ala Val Leu Thr Ile Asp Glu Lys Gly Thr Glu Ala Ala Gly Ala Met Phe Leu Glu Ala Ile Pro Met Ser Ile Pro Pro Glu Val Lys Phe Asn Lys Pro Phe Val Phe Leu Met Ile Glu Gln Asn Thr Lys Ser Pro Leu Phe Met Gly Lys Val Val Asn Pro Thr Gln Lys

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FIG. 69A-1

GCTAACCTAGTGCTATAGCTAAGGCAGGTACCTGCATCCTGTTTT
GTTTAGTGGATCCCTCATCCTTCAGAGACTCTGGAACCCCTGTGGTCT
TCTCTCATCTAATGACCCCTGAGGGGATGGAGGTTCAAGTCCTCCA
GAGAGGAATGTCCTAACGCCCTTGAGTAGGGTAAGCATCATGGCTGGC
AGCTCACAGGTTGCTCTACTTCAGGCGACTGTGCGTGGCATCAGGT
GCCGCCCCCTGCATCCCTAAAAGCTCGGCTACAGCTCGGTGGTGTGT
GTCTGCAATGCCACATACTGTGACTCCTTGACCCCCCGACCTTCT
GCCCTGGTACCTCAGCCGCTATGAGAGTACACGCAGTGGCGACG
GATGGAGCTGAGTATGGGGCCATCCAGGCTAATCACACGGGCACAG
GCCTGCTACTGACCCCTGCAGCCAGAACAGAAAGTCCAGAAAGTGAAG
GGATTGGAGGGGCCATGACAGATGCTGCTGCTCAACATCCTTGCC
CTGTCACCCCTGCCAAAATTGCTACTTAAATGCTACTTCTCTGAA
GAAGGAATCGGATATAACATCATCCGGTACCCATGGCCAGCTGTGAA
CTTCTCCATCCGCACCTACACCTATGCGACACCCCTGATGATTCCA
GTTGCAACACTCAGCCTCCAGAGGAAGATACCAAGCTCAAGATAC
CCCTGATTCACCGAGCCCTGCAGTTGCCAGCGTCCGTTACTCC
TTGCCAGCCCCCTGGACATACCCACTTGGCTCAAGACCAATGGAGCG
GTGAATGGGAAGGGTCACTCAAGGGACAGCCCCGAGACATCTACC
ACCAGACCTGGGCCAGATACTTGTGAAGTCCCTGGATGCCATGCTG
AGCACAAGTTACAGTCTGGCAGTGCAGCTGAAATGAGCCTTCT
GCTGGGCTGGTGAATGGAATACCCCTCCAGTGCCTGGCTTCACCCCT
GAACATCAGCGAGACTTCATTGGCCCTGACCTAGGTCTACCCCTGC
AACAGTACTCACCAACATGTCCGCCTACTCATGCTGGATGACCAACGC
TTGCTGCTGCCCACTGGCAAAAGGGTGTACTGACAGACCCAGAACG
AGCTAAATATGTCATGGCATTGCTGTACATTGGTACCTGGACTTCT
GGCTCCAGCCAAAGCCACCCTAGGGGAGACACACCGCCTGTTCCCA
ACACCATGCTCTTGCTCAGAGGCTGTGTTGGCTCCAAGTCTGGG
AGCAGAGTGTGGCTAGGCTCTGGATCGAGGGATGCAGTACAGC
CACAGCATCATCAGAACCTCCCTGTACCATGTGCTGGCTGGACCGAC
TGGAAACCTTGGCCCTGAACCCCGAAGGAGGGACCCATTGGGTGCGTAA
CTTGTGACAGTCCCATTTGAGACATCACCAAGGACACCGTTTA
CAAACAGCCCATGTTCTACCCACCTTGGCCACTTCAGCAAGTCTATT
TGAGGGCTCCAGAGAGTGGGCTGTTGCCAGTCAGAAGAACGACC
TGGACGCAGTGGCACTGATGCATCCCGATGGCTCTGCTGTTGTGGTC
TGCTAAACCGCTCCCTAAGGATGTGCTCTTACCATCAAGGATCCTG
CTGTTGGCTCTGGAGACAATCTCACCTGGCTACTCCATTACACCT
ACCTGTGGCATGCCAGTGTGATGGAGCAGATACTCAAGGAGGCACTGG
GCTCAGCCTGGCATTAAAGGGACAGAGTCAGCTCACACGCTGTG
TGACTAAAGAGGGCACAGCAGGGCAGTGTGAGCTTACAGCGACGT

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FIG. 69A-2

AAGCCCAGGGCAATGGTTGGGTGACTCACTTCCCCTAGGTGGT
GCCAGGGCTGGAGGCCCTAGAAAAAGATCAGTAAGCCCCAGTGTG
CCCCAGCCCCATGCTTATGTGAACATGCGCTGTGCTGCTTGCCT
TGGAAACT

FIG. 69B

Met Glu Phe Ser Ser Pro Ser Arg Glu Glu Cys Pro Lys Pro Leu Ser Arg Val Ser
Ile Met Ala Gly Ser Leu Thr Gly Leu Leu Leu Gln Ala Val Ser Trp Ala Ser
Gly Ala Arg Pro Cys Ile Pro Lys Ser Phe Gly Tyr Ser Ser Val Val Cys Val Cys
Asn Ala Thr Tyr Cys Asp Ser Phe Asp Pro Pro Thr Phe Pro Ala Leu Gly Thr
Phe Ser Arg Tyr Glu Ser Thr Arg Ser Gly Arg Arg Met Glu Leu Ser Met Gly
Pro Ile Gln Ala Asn His Thr Gly Thr Gly Leu Leu Leu Thr Leu Gln Pro Glu Gln
Lys Phe Gln Lys Val Lys Gly Phe Gly Gly Ala Met Thr Asp Ala Ala Ala Leu
Asn Ile Leu Ala Leu Ser Pro Pro Ala Gln Asn Leu Leu Leu Lys Ser Tyr Phe Ser
Glu Glu Gly Ile Gly Tyr Asn Ile Ile Arg Val Pro Met Ala Ser Cys Asp Phe Ser
Ile Arg Thr Tyr Thr Tyr Ala Asp Thr Pro Asp Asp Phe Gln Leu His Asn Phe Ser
Leu Pro Glu Glu Asp Thr Lys Leu Lys Ile Pro Leu Ile His Arg Ala Leu Gln Leu
Ala Gln Arg Pro Val Ser Leu Leu Ala Ser Pro Trp Thr Ser Pro Thr Trp Leu Lys
Thr Asn Gly Ala Val Asn Gly Lys Gly Ser Leu Lys Gly Gln Pro Gly Asp Ile
Tyr His Gln Thr Trp Ala Arg Tyr Phe Val Lys Phe Leu Asp Ala Tyr Ala Glu
His Lys Leu Gln Phe Trp Ala Val Thr Ala Glu Asn Glu Pro Ser Ala Gly Leu
Leu Ser Gly Tyr Pro Phe Gln Cys Leu Gly Phe Thr Pro Glu His Gln Arg Asp
Phe Ile Ala Arg Asp Leu Gly Pro Thr Leu Ala Asn Ser Thr His His Asn Val Arg
Leu Leu Met Leu Asp Asp Gln Arg Leu Leu Leu Pro His Trp Ala Lys Val Val
Leu Thr Asp Pro Glu Ala Ala Lys Tyr Val His Gly Ile Ala Val His Trp Tyr Leu
Asp Phe Leu Ala Pro Ala Lys Ala Thr Leu Gly Glu Thr His Arg Leu Phe Pro
Asn Thr Met Leu Phe Ala Ser Glu Ala Cys Val Gly Ser Lys Phe Trp Glu Gln Ser
Val Arg Leu Gly Ser Trp Asp Arg Gly Met Gln Tyr Ser His Ser Ile Ile Thr Asn
Leu Leu Tyr His Val Val Gly Trp Thr Asp Trp Asn Leu Ala Leu Asn Pro Glu
Gly Gly Pro Asn Trp Val Arg Asn Phe Val Asp Ser Pro Ile Ile Val Asp Ile Thr
Lys Asp Thr Phe Tyr Lys Gln Pro Met Phe Tyr His Leu Gly His Phe Ser Lys
Phe Ile Pro Glu Gly Ser Gln Arg Val Gly Leu Val Ala Ser Gln Lys Asn Asp Leu
Asp Ala Val Ala Leu Met His Pro Asp Gly Ser Ala Val Val Val Leu Asn
Arg Ser Ser Lys Asp Val Pro Leu Thr Ile Lys Asp Pro Ala Val Gly Phe Leu Glu
Thr Ile Ser Pro Gly Tyr Ser Ile His Thr Tyr Leu Trp His Arg Gln

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FIG. 70A

ATGGATGCAATGAAGAGAGGGCTCTGCTGTGCTGCTGCTGTGG
AGCAGTCTTCGTTGCCAGCCAGGAAATCCATGCCGATTCAGAA
GAGGAGCCAGATCTTACCAAGTGTACTGCAGAGATGAAAAACGCA
GATGATATACCAACATCAGTCATGGCTGCCCTGTGCTCAGAA
GCAACCGGGTGAATATTGCTGGTCAACAGTGGCAGGGCACAGTG
CACTCAGTGCCTGTCAAAAGTTGCAAGCAGGCCAAGGTGTTCAACGG
GGCACCTGCCAGCAGGCCCTGTAACCTCAGATTCTGTGCCAGTG
CCCCGAAGGATTGCTGGGAAGTGTGTGAAATAGATACCAAGGGCCA
CGTGTACAGGACCAGGGCATCAGTCACAGGGCACGTGGAGCAC
AGCGGAGAGTGGCGCGAGTGCACCAACTGGAACAGCAGCGCGTTG
GCCAGAAGCCCTACAGCGGCCAGGGCACAGGCCATCAGGCTGG
GCCTGGGAACCAACTACTGCAGAAAACCCAGATCGAGACTCAAA
GCCCTGGTGCTACGTCTTAAGGCGGGGAAGTACAGTCAGAGTTCT
GCAGCACCCCTGCCCTGCTGTAGGGAAACAGTGAUTGCTACTTTGGG
AATGGGTCAAGCTACCGTGGCACGACAGCCTCACCGAGTCGGTGC
CTCCIGCCTCCCGTGGAAATCCATGATCCTGTAGGCAAGGTTACAC
AGCACAGAACCCAGTGCAGGCCAGGCACCTGGCTGGCAAACATAATT
ACTGCGGAATCCTGTAGGGGATGCCAACGCCCTGGTGCCACGTGCTG
AAGAACCGCAGGCTGACGTGGGAGTACTGTGTGATGCCCCCTCTGCTC
CACCTGCGGCCCTGAGACAGTACAGCCAGCCTCAGTTGCATCAAAG
GAGGGCTTCTGCCGACATGCCCTCCACCCCTGGCAGGCTGCCATCT
TTGCCAAGCACAGGAGGTGCCGGAGAGCGGTTCTGTGCGGGGGC
ATACTCATCAGCTCTGCTGGATTCTCTGTGCCGCCACTGCTTCCAG
GAGAGGTTCCGCCACCCACCTGACGGTGATCTGGCAGAACATA
CCGGTGGTCTCTGGCGAGGAGGAGCAGAAATTGAAGTCAAAAAA
TACATGTCATAAGGAATTGATGATGACACTTACGACAATGACAT
TGCCTGCTGCAGTGAATCGGATTCTGTGCCAGGAGA
GCAGCGTGGTCCGACTGTGTGCCCTCCCCGGGGACCTGCGACTG
CCGACTGGACGGAGTGTGAGCTCTCCGGTACGGCAAGCATGAGGC
CTTGTCTCTTCTATTGGAGCGGCTGAAGGAGGCTCATGTCAGACT
GTACCCATCCAGCCGCTGCACATCACAACATTTACTTAACAGAACAG
TCACCGACAACATGCTGTGTGCTGGAGACACTCGGAGCGGGGGCCC
CAGGCAAACCTGACGACGCCGCCAGGGCGATTGGAGGGCCCT
GGTGTGTCAACGATGGCGCATGACTTGGTGGGCATCATCAGCT
GGGGCTGGGTGTGGACAGAAGGATGTCCCGGGTGTACACCAAG
GTTACCAACTACCTAGACTGGATTGTCAGACAAACATGCGACCGTGC
AGGAACACCCGACTCCTCAAAAGCAAATGAGATCC

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FIG. 70B

Met Asp Ala Met Lys Arg Gly Leu Cys Cys Val Leu Leu Cys Gly Ala Val Phe Val Ser Pro Ser Gln Glu Ile His Ala Arg Phe Arg Arg Gly Ala Arg Ser Tyr Gln Val Ile Cys Arg Asp Glu Lys Thr Gln Met Ile Tyr Gln Gin His Gin Ser Trp Leu Arg Pro Val Leu Arg Ser Asn Arg Val Glu Tyr Cys Trp Cys Asn Ser Gly Arg Ala Gln Cys His Ser Val Pro Val Lys Ser Cys Ser Glu Pro Arg Cys Phe Asn Gly Gly Thr Cys Gln Gln Ala Leu Tyr Phe Ser Asp Phe Val Cys Gln Cys Pro Glu Gly Phe Ala Gly Lys Cys Cys Glu Ile Asp Thr Arg Ala Thr Cys Tyr Glu Asp Gln Gly Ile Ser Tyr Arg Gly Thr Trp Ser Thr Ala Glu Ser Gly Ala Glu Cys Thr Asn Trp Asn Ser Ser-Ala Leu Ala Gln Lys Pro Tyr Ser Gly Arg Arg Pro Asp Ala Ile Arg Leu Gly Leu Gly Asn His Asn Tyr Cys Arg Asn Pro Asp Arg Asp Ser Lys Pro Trp Cys Tyr Val Phe Lys Ala Gly Lys Tyr Ser Ser Glu Phe Cys Ser Thr Pro Ala Cys Ser Glu Gly Asn Ser Asp Cys Tyr Phe Gly Asn Gly Ser Ala Tyr Arg Gly Thr His Ser Leu Thr Glu Ser Gly Ala Ser Cys Leu Pro Trp Asn Ser Met Ile Leu Ile Gly Lys Val Tyr Thr Ala Gln Asn Pro Ser Ala Gln Ala Leu Gly Leu Gly Lys His Asn Tyr Cys Arg Asn Pro Asp Gly Asp Ala Lys Pro Trp Cys His Val Leu Lys Asn Arg Arg Leu Thr Trp Glu Tyr Cys Asp Val Pro Ser Cys Ser Thr Cys Gly Leu Arg Gln Tyr Ser Gln Pro Gln Phe Arg Ile Lys Gly Leu Phe Ala Asp Ile Ala Ser His Pro Trp Gln Ala Ala Ile Phe Ala Lys His Arg Arg Ser Pro Gly Glu Arg Phe Leu Cys Gly Ile Leu Ile Ser Ser Cys Trp Ile Leu Ser Ala Ala His Cys Phe Gln Glu Arg Phe Pro His His Leu Thr Val Ile Leu Gly Arg Thr Tyr Arg Val Val Pro Gly Glu Glu Gln Lys Phe Glu Val Glu Lys Tyr Ile Val His Lys Glu Phe Asp Asp Asp Thr Tyr Asp Asn Asp Ile Ala Leu Leu Gln Leu Lys Ser Asp Ser Ser Arg Cys Ala Gln Glu Ser Ser Val Val Arg Thr Val Cys Leu Pro Pro Ala Asp Leu Gln Leu Pro Asp Trp Thr Glu Cys Glu Leu Ser Gly Tyr Gly Lys His Glu Ala Leu Ser Pro Phe Tyr Ser Glu Arg Leu Lys Glu Ala His Val Arg Leu Tyr Pro Ser Ser Arg Cys Thr Ser Gln His Leu Leu Asn Arg Thr Val Thr Asp Asn Met Leu Cys Ala Gly Asp Thr Arg Ser Gly Gly Pro Gln Ala Asn Leu His Asp Ala Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Leu Asn Asp Gly Arg Met Thr Leu Val Gly Ile Ile Ser Trp Gly Leu Gly Cys Gly Gln Lys Asp Val Pro Gly Val Tyr Thr Lys Val Thr Asn Tyr Leu Asp Trp Ile Arg Asp Asn Met Arg Pro

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FIG. 71A

ATCACTCTTTAACACTACTCACATTAACCTCAACTCCGCCACAA
 TGTACAGGATGCAACTCCGTCTGCATTGACTAATTCTGCACTTG
 TCACAAACAGTCACCTACTCAAGTCAGACAAAGAAAACAAGAAA
 ACACAGCTACAACTGGAGCATTTACTGCTGGATTACAGATGATTITG
 AATGGAATTATAATTACAAGAACATCCAACTCACCAAGGATGCTCAC
 ATTTAAGTTTACATGCCAACAGAACATGAAACAGCTTC
 AGTGTCTAGAAGAACATCAAACCTCTGGAGGAAGTGTGAATTAA
 GCTCAAAGCAAAACTTCACTTAAGACCCAGGGACTTAATCAGCAA
 TATCAACGTAATAGTTCTGGAACTAAAGGGATCTGAAACACATTCA
 TGTGTGAATATGCAGATGAGACAGCAACCATTGAGAATTCTGAAC
 AGATGGATTACCTTTGTCAAAGCATCATCTCAACACTAACATTGATAA
 TTAAGTGTCTCCCACTTAAACATATCAGGCCTCTATTATTTATTAA
 AATATTAAATTATATTATTTATGTTGAATGTATGGTGTACCTATTG
 TAACATTATTATTCTTAATCTAAAACATATAAATATGGATCTTTATGAT
 TCTTTTGTAAGCCCTAGGGCTCTAAAATGGTTACCTTATTATCC
 CAAAAAATATTATTATGTTGAATGTTAAATATAGTATCTATGTAG
 ATTGGTTAGTAAAACATTAAATAAATTGATAAAATATAAAAAAAA
 AAACAAAAAA

FIG. 71B

Met Tyr Arg Met Gin Leu Leu Ser Cys Ile Ala Leu Ile Leu Ala Leu Val Thr Asn
 Ser Ala Pro Thr Ser Ser Ser Thr Lys Thr Lys Lys Thr Gln Leu Gln Leu Glu
 His Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn
 Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr
 Glu Leu Lys Gln Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu Glu Val
 Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser
 Asn Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu
 Tyr Ala Asp Glu Thr Ala Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Cys
 Gln Ser Ile Ile Ser Thr Leu Thr

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FIG. 72A-1

ATGCAAATAGAGCTCCACCTGCTTCTGCGCTTGTGCGATTCT
GCTTAGTGCCACAGAAGATACTACCTGGGTGAGCTGCCTGTGGACGCAAG
TGGGACTATATGCAAAGTGTCTCGGTGAGCTGCCTGTGGACGCAAG
ATTTCCTCTAGAGTGCCTAAATCTTCCATTCAACACCTCAGTCGT
GTACAAAAAGACTCTGTTGTAGAATTCACGGATCACCTTCAACAT
CGCTAAGCCAAGGCCACCCCTGGATGGGTCTGCTAGGGCCTACCATCC
AGGCTGAGGTTATGATACAGTGGTCAATTACACTTAAGAACATGGCT
TCCCACATCTGTCACTGTTGTGTTGTGATCTACTGGAAAG
TCTGAGGGAGCTGAATATGATGATCAGACAGTCAAAGGGAGAAC
AACATGATAAAAGTCTCCCTGGTGGAAAGCCATACATATGTCGGCAG
GTCCTGAAAGAGAAATGGTCAATGGCCTCTGACCCACTGTGCCCTAC
CTACTCATATCTTCTCATGGACCTGGTAAAGACTTGAATTCA
CCTCATTGGAGCCCTACTAGTATGTAGAGAACGGAGTCTGCCAAGG
AAAAGACACAGACCTTGCACAAATTAACTACTTGTGTTGATTTG
ATGAAGGAAAAGTGGCACTCAGAACAAAGAACACTCCTTGATGCA
GGATAGGGATGCTGCATCTGCTGGGCTGGCTAAATGCCACAG
TCAATGGTTATGTAACACAGGCTCTGCCAGGCTGATTGGATGCCA
GGAATCAGTCTATTGGCATGTGATTGGATGGCACCACCTCTGAA
GTGCACTCAATATTCTCGAAGGTACACATTTCTGTGAGGAACCAT
GCCAGGGCGTCTGGAAATCTGCCAATAACTTCTTACTGCTCAA
ACACTCTTGATGGACCTGGACAGTTCTACTGTTTGTATATCTT
CCCACCAACATGATGGCATGGAAAGCTTATGTCAAAGTAGACAGCTGT
CCAGAGGAACCCAACTACGAATGAAAAATAATGAAGAACGGAG
ACTATGATGATGATCTTACTGATTCTGAAATGGATGTTGAGGTTG
ATGATGACAACACTCTTCTTATCCAAATTCGCTCAGTGGCAAGA
AGCATCTAAACTTGGGTACATTACATTGCTGCTGAAGAGGAGGAC
TGGGACTATGCTCCCTTAGTCCTGCCCGATGACAGAAGGTATAAA
AGTCAATATTGAAACAATGGCCCTCAGCGGATTGGTAGGAAGTACAA
AAAAGTCCGATTATGGCATAACACAGATGAAACCTTAAGACTCGT
AAGCTATTGAGCATGAAATCAGGAATCTGGACCTTACTTTATGGGG
AAGTTGGAGACACACTGTTGATTATATTAAAGAATCAAGCAAGCAGA
CCATATAACATCTACCCCTCACGGAAATCACTGATGTCGGTCTTGTAT
TCAAGGAGATTACAAAAGGTGAAACACATTGAAGGGATTITCCAAAT
TCTGCCAGGAGAAATTCACCATGAAATGGACAGTGAAGTGAAG
ATGGGCAACTAAATCAGATCCTCGGTGCTGACCCGCTTACTCTA
GTTTCGTTAATATGGAGAGAGATCTAGCTTCAGGACTCATTGGCCCTC
TCCTCATCTGCTACAAAGAATCTGTAGATCAAAGAGGAACCAAGATA
ATGTCAGACAAGAGGAATGTCATCCTGTTCTGTATTGATGAGAAC
CGAAGCTGGTACCTCACAGAGAATATAACGCTTCTCCCCAATCCA
GCTGGAGTGCAGCTGAGGATCCAGAGTTCCAAGCCTCAACATCAT
GCACAGCATCAATGGCTATGTTGTAGTGTGAGTTGCAAGTGTGAGTTG
TTGTCATGAGGTGGCATACTGGTACATTCTAAGCATTGGAGCACAGA
CTGACTTCCCTTCTGTCTTCTGATGATACCTCAAAACACAAAAT

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FIG. 72A-2

GGTCTATGAAGACACACTCACCTATTCCCATTCTCAGGAGAAACTGT
CTTCATGTCATGGAAAACCCAGGTCTATGGATTCTGGGGTGCACAA
ACTCAGACTTCGGAACAGAGGCATGCCCTACTGAAGGTTCT
AGTTGTGACAAGAACACTGGTGATTATTACGAGGGACAGTTATGAAGA
TATTCTCAGCATACTTGTGAGTAAAAAACATGCCATTGAACCAAGAA
GCTTCTCCCAGAATTCAAGACACCGTAGCACTAGGCAAAAGCAATT
AATGCCACCACAATTCCAGAAAAATGACATAGAGAAGACTGACCCCTG
GTTTGACACAGAACACCTATGCCAAAATACAAAATGTCTCCTCTA
GTGATTGTTGATGCTCTGCGACAGAGTCCTACTCCACATGGGCTAT
CCTTATCTGATCTCAAGAACGCCAATATGAGACTTTCTGATGATC
CATCACCTGGAGCAATAGACAGTAATAACAGCCTGTCTGAAATGACA
CACTCAGGCCACAGCTCCATCACAGTGGGACATGGTATTACCCC
TGAGTCAGGCCCTCCAATTAAAGATTAATGAGAAACTGGGACAACTG
CAGAACACAGAGTTGAAGAACACTGATTCAAAAGTTCTAGTACATCA
AATAATCTGATTCAACAATTCCATCAGACAAATTGGCAGCAGGACT
GATAATACAAGTCTTCTAGGACCCCCAAGTATGCCAGTTATGAT
AGTCATTAGATACCACTTATTGGCAAAAAGTCATCTCCCTTACT
GAGTCTGGTGGACCTCTGAGCTGAGTGAAGAAAATAATGATTCAAA
GTTGTTAGAATCAGGTTAATGAATAGCCAAGAAAAGTTCATGGGGAA
AAAATGTATCGTCAACAGAGAGTGGTAGGTTATTAAAGGGAAAAGA
GCTCATGGACCTGCTTGTGACTAAAGATAATGCCATTCAAAGTT
AGCATCTTGTAAAGACAAACAAAATCCAATAATTCAAGCAACT
AATAGAAAAGACTCACATTGATGCCCATCATTATAATTGAGAATAG
TCCATCAGTCTGGCAAAATATTAGAAAAGTGCACACTGAGTTAAA
AAGTGCACACCTTGATTGATGACAGAATGCTTATGGACAAAAAATG
ACAGCTTGAGGCTAAATCATATGTCAAATAAAACTACTTCATCAA
AAACATGGAAATGGTCCAACAGAAAAAAAGAGGGCCCCATTCCACCA
GATGCACAAAATCCAGATATGCTCTTAAAGATGCTATTCTGCCA
GAATCAGCAAGGTGGATACAAAGGACTCATGGAAAGAACTCTGAA
CTCTGGCAAGGCCAGTCCAAAGCAATTAGTATCCTTAGGACAG
AAAATCTGTGGAAGGTGAGAATTACAAAGGACTCATGGAAAGAAAGTG
GTAGTAGGAAAGGGTGAATTACAAAGGACTCATGGAAAGAAACT
TGGTTTCTCAAGCAGCAGAAACCTTACTAACTTGTGATAATT
TACATGAAAATAATACACACAACTCAAGAGAATGTAGTTGCC
AAATAGAAAAGAAGGAAACATTAATCAAGAGAATGTAGTTGCC
AGATACATACAGTGACTGGCACTAAGAATTCTCATGAAGAACCTTTC
TTACTGAGCACTAGGCAAAATGTAGAAGGTTCATATGACGGGGATA
TGCTCCAGTACTCAAGATTAGGTCTTAAATGATTCAACAAATAG
AACAAAGAACACACAGCTATTCTCAAAAAAAGGGGAGGAAGAA
AACTTGGAAAGGCTTGGGAAATCAAACCCAGCAAAATTGTAGAGAAATAT
GCATGCACCAAGGAATATCTCTTAATACAAGGCCAGCAGAAATTG
TCACGCAACGTAGTAAGAGAGCTTGTAAACAAATTCAAGACTCCCACTA

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FIG. 72A-3

GAAGAAACAGAACATTGAAAAAAGGATAATTGGGATGACACCTCAAC
CCAGTGGTCCAAAACATGAAACATTGACCCCGAGCACCTCACAC
AGATAGACTACAATGAGAAGGAGAAGGGCCATTACTCAGTCTCCC
TTATCAGATTGCCCTACGAGGAGTCAGCATCCCTCAAGCAAATAGA
TCTCATTACCCATTGCAAAGGTATCATCATTTCATCTATTAGACCTA
TATATCTGACCAGGGCTTATTCCAAGACAACCTCTCATCTTCCAG
CAGCATCTATAGAAAGAAAGATCTGGGTCCAAGAAAGCAGTCAT
TTCTTACAAGGAGCCAAAAAAATAACCTTCTTAGCCATCTAAC
TTGGAGATGACTGGTGATCAAAGAGAGGTTGGCTCCCTGGGAGAAC
TGCCACAAATTCACTGACATACAAGAAAGTTGAGAACACTGTTCTCCC
GAAACCAGACTGCCAAAACATCTGGCAAAGTTGAATTGTTCCAA
AAGTTCACATTTCAGAAGGACCTATTCCCTACGGAAACTAGCAATG
GGTCTCTGGCCATCTGGATCTCGTGGAAAGGGAGCCTTCTCAGGGAA
CAGAGGGAGCGATTAAGTGAATGAAGCAAACAGACCTGGAAAAGT
TCCCTTCTGAGAGTAGCAACAGAAAGCTCTGCAAAGACTCCCTCCAA
GCTATTGGATCTCTGCTTGGATAACCATATGGTACTCAGATACC
AAAAAAGAGTGGAAATCCAAGAGAAAGTCACCGAGAAAAAACAGCT
TTAAGAAAAAGGATACCATTGTCCCTGAACGCTTGTGAAAGCAAT
CATGCAATAGCAGCAATAATGAGGGACAAAATAAGCCGAAATAG
AAGTCACCTGGCAAAGCAAGGTAGGACTGAAAGGCTGTGCTCTCAA
AACCCACCAGTCTGAAACGCCATCAACGGGAAATAACTCGTACTAC
TCTTCAGTCAGATCAAGAGGAATTGACTATGATGATACCATATCAGT
TGAATGAAGAAGGAAGATTGACATTTATGATGAGGATGAAAATC
AGAGCCCCCGCAGCTTCAAAGAAAACACGACACTATTATTGCTG
CAGTGGAGAGGGCTCTGGGATTATGGGATGAGTAGCTCCCCACATGTT
CTAAGAAACAGGGCTCAGAGTGGCAGTGTCCCTCAGTTCAAGAAAGT
TGTTTCCAGGAATTACTGATGGCTCTTACTCAGCCCTTACCGT
GGAGAACTAAATGAACATTGGACTCTGGGCCATATAAGAGC
AGAAGTTGAAGATAATATCATGGTAACATTCTAGAAATCAGGCCCTC
GTCCCTATTCCCTTCTATTCTAGCCTTATTCTTATGAGGAAGATCAGAG
GCAAGGAGCAGAACCTAGAAAAACTTGTCAAGCCTAATGAAACCA
AAACTTACTTTGGAAAGTGCACATCATGGCACCCACTAAAGAT
GAGTTGACTGCAAAGCCTGGCTTATTCTGATGTTGACCTGGAA
AAAGATGTGCACTCAGGCTGATGGAGCCCTTCTGGTCTGCCACACT
AACACACTGAACCCCTGCTATGGGAGACAAGTGACAGTACAGGAATT
TGCTCTGTTTCACCATCTTGTGATGAGACCAAAAGCTGGTACTTCACT
GAAAATATGGAAAGAAACTGCAGGGCTCCCTGCAATATCAGATGGA
AGATCCCACTTAAAGAGAATTATCCTCCATGCAATCAATGGCTA
CATATGGGATACACTACCTGGCTTAGTAAATGGCTCAGGATCAAAGGA
TTCGATGGTATCTGCTCAGCATGGCAGCAATGAAAACATCCATTCT
ATTCAATTCACTGGACATGTGTTCACTGTACGAAAAAAAGAGGAGTA
TAAATGGCACTGTACAATCTCTATCCAGGTGTTTGAGACAGTGGAA

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FIG. 72A-4

AATGTTACCATCCAAAGCTGGAATTGGCGGGTGGAAATGCCATTGG
CGAGCATCTACATGCTGGGATGAGCACACACTTTCTGGTGTACAGCAA
TAAGTGTAGACTCCCTGGGAATGGCTCTGGACACATTAGAGATT
TCAGATTACAGCTTCAGGACAATATGGACAGTGGGCCAAAGCTGG
CCAGACTCTATTCCGGATCAATCAATGCCTGGAGCACCAGGAG
CCCTTCTGGATCAAGGTGGATCTGGCACCACATGATTAC
GGCATCAAGACCCAGGGTGGCCGTCAAGATTCTCCAGCCTACAT
CTCTCAGTTATCATCATGTATAGCTTGATGGGAAGAAGTGGCAGA
CTTATCGAGGAAATTCCACTGGAACCTTAATGGTCTTGGCAATG
TGGATTCATCTGGATAAAACACAATATTAAACCCCTCCAATTATTG
CTCGATACATCCGTTGCACCCAACCTATTATAGCATTGCAAGCACTC
TTCGCATGGAGTTGATGGGCTGTGATTAAATAGTTGCAGCAGTC
TGGGAATGGAGAGTAAAGCAATATCAGATGCACAGATTACTGCTTC
TCCTACTTTACCAATATGTTGCCACCTGGCTCTCTCAAAGCTCGA
CTTCACCTCAAGGGAGGAGTAATGCCTGGAGACCTCAGGTAAATA
TCCAAAAGAGTGGCTGCAAGTGGACTCCAGAAAGACAATGAAAGTC
CAGGAGTAACTACTCAGGGAGTAAAGATTCTGCTTACAGCATGTAT
GTGAAGGAGTTCTCATCTCCAGCAGTCAGATGGCCATCAGTGGAC
TCTCTTTTCAAGAATGGCAAAGTAAGGTTTCAAGGAAATCAAGA
CTCCCTCACACCTGTGGTGAACTCTAGACCCACCGTTACTGACTCG
CTACCTCGAATTCCCCCAGAGTTGGGTGCACAGATTGCCCTGAG
GATGGAGGTTCTGGGCTGCGAGGACAGGACCTACTGAGGGTGGC
CACTGCAGCACCTGCCACTGGCTCACCTCTCCCTCAGCTCCAGG
GCAGTGTCCCTGGCTGCACCTCTACCTTGTGCTAAATCTCAG
AGACACTGCCTGAAGCCTCTGAATTAACTATCATCAGTCTGCATT
TCTTGGTGGGGGCCAGGGAGGTGCATCCAATTAACTTAACCTCTA
CCTATTCTGCAGCTGCTCCAGATTACTCCCTCTCCAATATAACT
AGGAAAAAGAAGTGGAGGAGAAACCTGCATGAAAGCATTCTCCCTG
AAAAGTTAGGCCTCTCAGAGTCACCACTCCCTGTGTAGAAAAACT
ATGTGATGAAACTTGAAGAAGATATTATGATGTTAACATTTCAGGT
TAAGCCTCATACGTTAAAGATTTAAACTCTCAGTTGTTATTATCCTGA
TCAAGCATGGAACAAAGCATGTTTCAGGATCAGATCAATACAATCTT
GGAGTCAAAAGGCAATCTGGACAATCTGCAAATGGAGGAGAA
TACAATAACTACAGTAAAGTGTGTTCTGCTTCCACATAG
TATAATTATGTTATTAGTCATTATGAGGGGCACATTCTTATCTCAA
AACTAGCATTCTAAACTGAGAATTATAGATGGGGTCAAGAATCCC
TAAGTCCCTGAAATTATATAAGGCATCTGTATAATGCAAATGTGC
ATTTCTGACGAGTGTCCATAGATATAAGGCCATTGGTCTTAATTCT
GACCAATAAAAAATAAGTCAGGAGGATGCAATTGTTGAAAGCTTG
AAATAAAATAACAATGTCTTGTGAAATTGTGATGGCCAAGAAAGA
AAATGATGA

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FIG. 72B-1

Met Gln Ile Glu Leu Ser Thr Cys Phe Phe Leu Cys Leu Leu Arg Phe Cys Phe Ser Ala Thr Arg Arg Tyr Tyr Leu Gly Ala Val Glu Leu Ser Trp Asp Tyr Met Gln Ser Asp Leu Gly Glu Leu Pro Val Asp Ala Arg Phe Pro Pro Arg Val Pro Lys Ser Phe Pro Phe Asn Thr Ser Val Val Tyr Lys Lys Thr Leu Phe Val Glu Phe Thr Asp His Leu Phe Asn Ile Ala Lys Pro Arg Pro Pro Trp Met Gly Leu Leu Gly Pro Thr Ile Gln Ala Glu Val Tyr Asp Thr Val Val Ile Thr Leu Lys Asn Met Ala Ser His Pro Val Ser Leu His Ala Val Gly Val Ser Tyr Trp Lys Ala Ser Glu Gly Ala Glu Tyr Asp Asp Gln Thr Ser Gln Arg Glu Lys Glu Asp Asp Lys Val Phe Pro Gly Gly Ser His Thr Tyr Val Trp Gln Val Leu Lys Glu Asn Gly Pro Met Ala Ser Asp Pro Leu Cys Leu Thr Tyr Ser Tyr Leu Ser His Val Asp Leu Val Lys Asp Leu Asn Ser Gly Leu Ile Gly Ala Leu Leu Val Cys Arg Glu Gly Ser Leu Ala Lys Glu Lys Thr Gln Thr Leu His Lys Phe Ile Leu Leu Phe Ala Val Phe Asp Glu Gly Lys Ser Trp His Ser Glu Thr Lys Asn Ser Leu Met Gln Asp Arg Asp Ala Ala Ser Ala Arg Ala Trp Pro Lys Met His Thr Val Asn Gly Tyr Val Asn Arg Ser Leu Pro Gly Leu Ile Gly Cys His Arg Lys Ser Val Tyr Trp His Val Ile Gly Met Gly Thr Thr Pro Glu Val His Ser Ile Phe Leu Glu Gly His Thr Phe Leu Val Arg Asn His Arg Gln Ala Ser Leu Glu Ile Ser Pro Ile Thr Phe Leu Thr Ala Gln Thr Leu Leu Met Asp Leu Gly Gln Phe Leu Leu Phe Cys His Ile Ser Ser His Gln His Asp Gly Met Glu Ala Tyr Val Lys Val Asp Ser Cys Pro Glu Glu Pro Gln Leu Arg Met Lys Asn Asn Glu Glu Ala Glu Asp Tyr Asp Asp Asp Leu Thr Asp Ser Glu Met Asp Val Val Arg Phe Asp Asp Asp Asn Ser Pro Ser Phe Ile Gln Ile Arg Ser Val Ala Lys Lys His Pro Lys Thr Trp Val His Tyr Ile Ala Ala Glu Glu Asp Trp Asp Tyr Ala Pro Leu Val Leu Ala Pro Asp Asp Arg Ser Tyr Lys Ser Gln Tyr Leu Asn Asn Gly Pro Gin Arg Ile Gly Arg Lys Tyr Lys Val Arg Phe Met Ala Tyr Thr Asp Glu Thr Phe Lys Thr Arg Glu Ala Ile Gln His Glu Ser Gly Ile Leu Gly Pro Leu Leu Tyr Gly Glu Val Gly Asp Thr Leu Leu Ile Ile Phe Lys Asn Gln Ala Ser Arg Pro Tyr Asn Ile Tyr Pro His Gly Ile Thr Asp Val Arg Pro Leu Tyr Ser Arg Arg Leu Pro Lys Gly Val Lys His Leu Lys Asp Phe Pro Ile Leu Pro Gly Glu Ile Phe Lys Tyr Lys Trp Thr Val Thr Val Glu Asp Gly Pro Thr Lys Ser Asp Pro Arg Cys Leu Thr Arg Tyr Tyr Ser Ser Phe Val Asn Met Glu Arg Asp Leu Ala Ser Gly Leu Ile Gly Pro Leu Leu Ile Cys Tyr Lys Glu Ser Val Asp Gln Arg Gly Asn Gln Ile Met Ser Asp Lys Arg Asn Val Ile Leu Phe Ser Val Phe Asp Glu Asn Arg Ser Trp Tyr Leu Thr Glu Asn Ile Gln Arg Phe Leu Pro Asn Pro Ala Gly Val Gln Leu Glu Asp Pro Glu Phe Gln Ala Ser Asn Ile Met His Ser Ile Asn Gly Tyr Val Phe Asp Ser Leu Gln Leu Ser Val Cys Leu His Glu Val Ala Tyr Trp Tyr Ile Leu Ser Ile Gly Ala Gln Thr Asp Phe Leu Ser Val Phe Phe Ser Gly Tyr Thr Phe Lys His Lys Met Val Tyr Glu Asp Thr Leu Thr Leu Phe Pro Phe Ser Gly Glu Thr Val Phe Met Ser Met Glu Asn Pro Gly Leu Trp Ile Leu Gly Cys His Asn Ser Asp Phe

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FIG. 72B-2

Arg Asn Arg Gly Met Thr Ala Leu Leu Lys Val Ser Ser Cys Asp Lys Asn Thr Gly Asp Tyr Tyr Glu Asp Ser Tyr Glu Asp Ile Ser Ala Tyr Leu Leu Ser Lys Asn Asn Ala Ile Glu Pro Arg Ser Phe Ser Gln Asn Ser Arg His Arg Ser Thr Arg Gln Lys Gln Phe Asn Ala Thr Thr Ile Pro Glu Asn Asp Ile Glu Lys Thr Asp Pro Trp Phe Ala His Arg Thr Pro Met Pro Lys Ile Gln Asn Val Ser Ser Ser Asp Leu Leu Met Leu Leu Arg Gln Ser Pro Thr Pro His Gly Leu Ser Asp Leu Gln Glu Ala Lys Tyr Glu Thr Phe Ser Asp Asp Pro Ser Pro Gly Ala Ile Asp Ser Asn Asn Ser Leu Ser Glu Met Thr His Phe Arg Pro Gln Leu His His Ser Gly Asp Met Val Phe Thr Pro Glu Ser Gly Leu Gln Leu Arg Leu Asn Glu Lys Leu Gly Thr Thr Ala Ala Thr Glu Leu Lys Leu Asp Phe Lys Val Ser Ser Thr Ser Asn Asn Leu Ile Ser Thr Ile Pro Ser Asp Asn Leu Ala Ala Gly Thr Asp Asn Thr Ser Ser Leu Gly Pro Pro Ser-Met Pro Val His Tyr Asp Ser Gln Leu Asp Thr Thr Leu Phe Gly Lys Lys Ser Ser Pro Leu Thr Glu Ser Gly Gly Pro Leu Ser Leu Ser Glu Glu Asn Asn Asp Ser Lys Leu Leu Glu Ser Gly Leu Met Asn Ser Gln Glu Ser Ser Trp Gly Lys Asn Val Ser Ser Thr Glu Ser Gly Arg Leu Phe Lys Gly Lys Arg Ala His Gly Pro Ala Leu Leu Thr Lys Asp Asn Ala Leu Phe Lys Val Ser Ile Ser Leu Leu Lys Thr Asn Lys Thr Ser Asn Asn Ser Ala Thr Asn Arg Lys Thr His Ile Asp Gly Pro Ser Leu Leu Ile Glu Asn Ser Pro Ser Val Trp Gln Asn Ile Leu Glu Ser Asp Thr Glu Phe Lys Lys Val Thr Pro Leu Ile His Asp Arg Met Leu Met Asp Lys Asn Ala Thr Ala Leu Arg Leu Asn His Met Ser Asn Lys Thr Thr Ser Ser Lys Asn Met Glu Met Val Gln Gln Lys Lys Glu Gly Pro Ile Pro Pro Asp Ala Gln Asn Pro Asp Met Ser Phe Phe Lys Met Leu Phe Leu Pro Glu Ser Ala Arg Trp Ile Gln Arg Thr His Gly Lys Asn Ser Leu Asn Ser Gly Gln Gly Pro Ser Pro Lys Gln Leu Val Ser Leu Gly Pro Glu Lys Ser Val Glu Gly Gln Asn Phe Leu Ser Glu Lys Asn Lys Val Val Val Gly Lys Gly Phe Thr Lys Asp Val Gly Leu Lys Glu Met Val Phe Pro Ser Ser Arg Asn Leu Phe Leu Thr Asn Leu Asp Asn Leu His Glu Asn Asn Thr His Asn Gln Glu Lys Lys Ile Gln Glu Glu Ile Glu Lys Lys Glu Thr Leu Ile Gln Glu Asn Val Val Leu Pro Gln Ile His Thr Val Thr Gly Thr Lys Asn Phe Met Lys Asn Leu Phe Leu Leu Ser Thr Arg Gln Asn Val Glu Gly Ser Tyr Asp Gly Ala Tyr Ala Pro Val Leu Gln Asp Phe Arg Ser Leu Asn Asp Ser Thr Asn Arg Thr Lys Lys His Thr Ala His Phe Ser Lys Lys' Gly Glu Glu Asn Leu Glu Gly Leu Gly Asn Gln Thr Lys Gln Ile Val Glu Lys Tyr Ala Cys Thr Thr Arg Ile Ser Pro Asn Thr Ser Gln Gln Asn Phe Val Thr Gln Arg Ser Lys Arg Ala Leu Lys Gln Phe Arg Leu Pro Leu Glu Gln Thr Glu Leu Glu Lys Arg Ile Ile Val Asp Asp Thr Ser Thr Gln Trp Ser Lys Asn Met Lys His Leu Thr Pro Ser Thr Leu Thr Gln Ile Asp Tyr Asn Glu Lys Glu Lys Gly Ala Ile Thr Gln Ser Pro Leu Ser Asp Cys Leu Thr Arg Ser His Ser Ile Pro Gln Ala Asn Arg Ser Pro Leu Pro Ile Ala Lys Val Ser Ser Phe Pro Ser Ile Arg Pro Ile Tyr Leu Thr Arg Val Leu Phe Gln Asp Asn Ser Ser His Leu Pro

FIG. 72B-3 304/498

Ala Ala Ser Tyr Arg Lys Lys Asp Ser Gly Val Gln Glu Ser Ser His Phe Leu Gln Gly Ala Lys Lys Asn Asn Leu Ser Leu Ala Ile Leu Thr Leu Glu Met Thr Gly Asp Gin Arg Glu Val Gly Ser Leu Gly Thr Ser Ala Thr Asn Ser Val Thr Tyr Lys Lys Val Glu Asn Thr Val Leu Pro Lys Pro Asp Leu Pro Lys Thr Ser Gly Lys Val Glu Leu Leu Pro Lys Val His Ile Tyr Gln Lys Asp Leu Phe Pro Thr Glu Thr Ser Asn Gly Ser Pro Gly His Leu Asp Leu Val Glu Gly Ser Leu Leu Gln Gly Thr Glu Gly Ala Ile Lys Trp Asn Glu Ala Asn Arg Pro Gly Lys Val Pro Phe Leu Arg Val Ala Thr Glu Ser Ala Lys Thr Pro Ser Lys Leu Leu Asp Pro Leu Ala Trp Asp Asn His Tyr Gly Thr Gln Ile Pro Lys Glu Glu Trp Lys Ser Gln Glu Lys Ser Pro Glu Lys Thr Ala Phe Lys Lys Asp Thr Ile Leu Ser Leu Asn Ala Cys Glu Ser Asn His Ala Ile Ala Ala Ile Asn Glu Gly Gln Asn Lys Pro Glu Ile Glu Val Thr Trp Ala Lys Gln Gly Arg Thr Glu Arg Leu Cys Ser Gln Asn Pro Pro Val Leu Lys Arg His Gln Arg Glu Ile Thr Arg Thr Thr Leu Gln Ser Asp Gln Glu Glu Ile Asp Tyr Asp Asp Thr Ile Ser Val Glu Met Lys Lys Glu Asp Phe Asp Ile Tyr Asp Glu Asp Glu Asn Gln Ser Pro Arg Ser Phe Gln Lys Lys Thr Arg His Tyr Phe Ile Ala Ala Val Glu Arg Leu Trp Asp Tyr Gly Met Ser Ser Ser Pro His Val Leu Arg Asn Arg Ala Gln Ser Gly Ser Val Pro Gln Phe Lys Lys Val Val Phe Gln Glu Phe Thr Asp Gly Ser Phe Thr Gln Pro Leu Tyr Arg Gly Glu Leu Asn Glu His Leu Gln Leu Leu Gly Pro Tyr Ile Arg Ala Glu Val Glu Asp Asn Ile Met Val Thr Phe Arg Asn Gln Ala Ser Arg Pro Tyr Ser Phe Tyr Ser Ser Leu Ile Ser Tyr Glu Glu Asp Gln Arg Gln Gly Ala Glu Pro Arg Lys Asn Phe Val Lys Pro Asn Glu Thr Lys Thr Tyr Phe Trp Lys Val Gln His His Met Ala Pro Thr Lys Asp Glu Phe Asp Cys Lys Ala Trp Ala Tyr Phe Ser Asp Val Asp Leu Glu Lys Asp Val His Ser Gln Ile Gly Pro Leu Leu Val Cys His Thr Asn Thr Leu Asn Pro Ala His Gly Arg Gln Val Thr Val Gln Glu Phe Ala Leu Phe Phe Thr Ile Phe Asp Glu Thr Lys Ser Trp Tyr Phe Thr Glu Asn Met Glu Arg Asn Cys Arg Ala Pro Cys Asn Ile Gln Met Glu Asp Pro Thr Phe Lys Glu Asn Tyr Arg Phe His Ala Ile Asn Gly Tyr Ile Met Asp Thr Leu Pro Gly Leu Val Met Ala Gln Asp Gln Arg Ile Arg Trp Tyr Leu Leu Ser Met Gly Ser Asn Glu Asn Ile His Ser Ile His Phe Ser Gly His Val Phe Thr Val Arg Lys Lys Glu Tyr Lys Met Ala Leu Tyr Asn Leu Tyr Pro Gln Val Phe Glu Thr Val Glu Met Leu Pro Ser Lys Ala Gly Ile Trp Arg Val Glu Cys Leu Ile Gly Glu His Leu His Ala Gly Met Ser Thr Leu Phe Leu Val Tyr Ser Asn Lys Cys Gln Thr Pro Leu Gly Met Ala Ser Gly His Ile Arg Asp Phe Gln Ile Thr Ala Ser Gly Gln Tyr Gly Gln Trp Ala Pro Lys Leu Ala Arg Leu His Tyr Ser Gly Ser Ile Asn Ala Trp Ser Thr Lys Glu Pro Phe Ser Trp Ile Lys Val Asp Leu Leu Ala Pro Met Ile Ile His Gly Ile Lys Thr Gln Gly Ala Arg Gln Lys Phe Ser Ser Leu Tyr Ile Ser Gln Phe Ile Ile Met Tyr Ser Leu Asp Gly Lys Lys Trp Gln Thr Tyr Arg Gly Asn Ser Thr Gly Thr Leu Met Val Phe Phe Gly Asn Val Asp Ser Ser Gly Ile

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FIG. 72B-4

Lys His Asn Ile Phe Asn Pro Pro Ile Ile Ala Arg Tyr Ile Arg Leu His Pro Thr His Tyr Ser Ile Arg Ser Thr Leu Arg Met Glu Leu Met Gly Cys Asp Leu Asn Ser Cys Ser Met Pro Leu Gly Met Glu Ser Lys Ala Ile Ser Asp Ala Gln Ile Thr Ala Ser Ser Tyr Phe Thr Asn Met Phe Ala Thr Trp Ser Pro Ser Lys Ala Arg Leu His Leu Gln Gly Arg Ser Asn Ala Trp Arg Pro Gln Val Asn Asn Pro Lys Glu Trp Leu Gln Val Asp Phe Gln Lys Thr Met Lys Val Thr Gly Val Thr Thr Gln Gly Val Lys Ser Leu Leu Thr Ser Met Tyr Val Lys Glu Phe Leu Ile Ser Ser Ser Gln Asp Gly His Gln Trp Thr Leu Phe Phe Gln Asn Gly Lys Val Lys Val Phe Gln Gly Asn Gln Asp Ser Phe Thr Pro Val Val Asn Ser Leu Asp Pro Pro Leu Leu Thr Arg Tyr Leu Arg Ile His Pro Gln Ser Trp Val His Gln Ile Ala Leu Arg Met Glu Val Leu Gly Cys Glu Ala Gln Asp Leu Tyr

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FIG. 73A

TCCACCTGTCCCCGAGGCCGGCTCGCGCCCTCTGCCAGGCC
GAGCCGCCGTCTAGCGCCCGACCTCGCCACCATGAGAGCCCTGCTG
GCGCGCCTGCTCTCTGCCCTGGTCGTGAGCGACTCCAAGGCAGC
AATGAACCTCATCAAGTCCATCGAACACTGTGACTGTCTAAATGGAGGA
ACATGTGTGTCCAACAAGTACTTCTCCAACATTCACTGGTGCACACTGC
CCAAAGAAATTGGAGGGCAGCACTGTGAAATAGATAAGTCAAAAC
CTGCTATGAGGGGAATGGTCACTTTACCGAGGAAGGCCAGCACTG
ACACCATGGGGGGCCCTGCCTGCCCTGAAACTCTGCCACTGTCC
AGCAAAACGTACCATGCCAACAGATCTGATGCTCTCAGCTGGGCTGG
GGAAACATAATTACTGCAGGAACCCAGACAACCGAGGCAGCCCTGG
TGCTATGTGAGGTGGCTAAAGCCGTTGTCCAAGAGTGATGGT
GCATGACTGCCAGATGGAAAAAGCCCTCCTCCTCCAGAAGAAT
TAAAATTCAGTGTGGCAAAAGACTCTGAGGCCCGCTTAAGATTA
TTGGGGGAGAATTCAACCACATCGAGAACCAAGCCCTGGTTGCGGCC
ATCTACAGGAGGACCGGGGGGGCTGTCACCTACGTGTTGGAGG
CAGCCTCATGCCCTGCTGGGTGATCAGCGCACACACTGCTTCAT
TGATTACCCAAAGAAGGAGGACTACATCGTCACTGGGTCGCTCAA
GGCTTAACCTAACCGCAAGGGAGATGAAAGTTGAGGTGGAAAC
CTCATCCTACACAAGGACTACAGCGTGCACCGCTGCTACCCACAC
GACATTGCCCTGCTGAAGATCCGTTCCAAGGAGGGCAGGTGTGCGCA
GCCATCCCGGACTATACAGACCATCTGCCCTGCCCTCGATGTATAACGA
TCCCCAGTTGGCACAAGCTGTGAGATCACTGGTTGGAAAAGAGA
ATTCTACCGACTATCTCTATCGGAGCAGCTGAAGATGACTGTTGTG
AGCTGATTCCACCGGGAGTGTCAAGCAGCCCCACTACTACGGCTCTG
AAGTCACCACCAAAATGCTGTGCTGCTGACCCACAGTGGAAAACA
GATTCTGCCAGGGAGACTCAGGGGGACCCCTCGTCTGTTCCCTCAA
GGCCGCATGACTTGAAGTGGAAATTGTGAGCTGGGGCCGTGGATGTG
CCTGAAGGACAAGCCAGGCGTCTACAGAGAGTCTCACACTTCTAC
CCTGGATCCGCAGTCACACCAAGGAAGAGAATGGCCTGGCCCTCTGA
GGGTCCCCAGGGAGGAACGGGCACCAACCGCTTCTGCTGGTTGTC
ATTTTGCACTAGAGTCATCTCCATCAGCTGTAAGAAGAGACTGGGA
AGAT

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FIG. 73B

Met Arg Ala Leu Leu Ala Arg Leu Leu Leu Cys Val Leu Val Val Ser Asp Ser Lys Gly Ser Asn Glu Leu His Gln Val Pro Ser Asn Cys Asp Cys Leu Asn Gly Gly Thr Cys Val Ser Asn Lys Tyr Phe Ser Asn Ile His Trp Cys Asn Cys Pro Lys Lys Phe Gly Gly Gln His Cys Glu Ile Asp Lys Ser Lys Thr Cys Tyr Glu Gly Asn Gly His Phe Tyr Arg Gly Lys Ala Ser Thr Asp Thr Met Gly Arg Pro Cys Leu Pro Trp Asn Ser Ala Thr Val Leu Gln Gln Thr Tyr His Ala His Arg Ser Asp Ala Leu Gln Leu Gly Leu Gly Lys His Asn Tyr Cys Arg Asn Pro Asp Asn Arg Arg Arg Pro Trp Cys Tyr Val Gln Val Gly Leu Lys Pro Leu Val Gln Glu Cys Met Val His Asp Cys Ala Asp Gly Lys Lys Pro Ser Ser Pro Pro Glu Glu Leu Lys Phe Gin Cys Gly Gln Lys Thr Leu Arg Pro Arg Phe Lys Ile Ile Gly Gly Glu Phe Thr Thr Ile Glu Asn Gln Pro Trp Phe Ala Ala Ile Tyr Arg Arg His Arg Gly Gly Ser Val Thr Tyr Val Cys Gly Gly Ser Leu Ile Ser Pro Cys Trp Val Ile Ser Ala Thr His Cys Phe Ile Asp Tyr Pro Lys Lys Glu Asp Tyr Ile Val Tyr Leu Gly Arg Ser Arg Leu Asn Ser Asn Thr Gln Gly Glu Met Lys Phe Glu Val Glu Asn Leu Ile Leu His Lys Asp Tyr Ser Ala Asp Thr Leu Ala His His Asn Asp Ile Ala Leu Leu Lys Ile Arg Ser Lys Glu Gly Arg Cys Ala Gln Pro Ser Arg Thr Ile Gln Thr Ile Cys Leu Pro Ser Met Tyr Asn Asp Pro Gln Phe Gly Thr Ser Cys Glu Ile Thr Gly Phe Gly Lys Glu Asn Ser Thr Asp Tyr Leu Tyr Pro Glu Gln Leu Lys Met Thr Val Val Lys Leu Ile Ser His Arg Glu Cys Gln Gln Pro His Tyr Tyr Gly Ser Glu Val Thr Thr Lys Met Leu Cys Ala Ala Asp Pro Gln Trp Lys Thr Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Ser Leu Gln Gly Arg Met Thr Leu Thr Gly Ile Val Ser Trp Gly Arg Gly Cys Ala Leu Lys Asp Lys Pro Gly Val Tyr Thr Arg Val Ser His Phe Leu Pro Trp Ile Arg Ser His Thr Lys Glu Glu Asn Gly Leu Ala Leu

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FIG.74A

TCCTGCACAGGCAGTGCTTGAAGTGCTTCTTCAAGAGACCTTCTTCA
TAGACTACTTTTTCTTAAGCAGCAAAAGGAGAAAATTGTCATCA
AGGATATTCCAGATTCTGACAGCATTCTCGTCATCTGAGGACATC
ACCATCATCTCAGGATGAGGGGCATGAAGCTGCTGGGGCGCTGCTG
GCACTGGCGGCCCTACTGCAGGGGGCGTGTCCCTGAAGATCGCAGC
CTTCAACATCCAGACATTGGGAGACCAAGATGTCAATGCCACCTT
CGTCAGCTACATTTGCAAGATCCTGAGCCGCTATGACATGCCCTGGT
CCAGGGAGGTCAAGAGACGCCACCTGACTGCCGTGGGAAGCTGCTGG
ACAACCTCAATCAGGATGCACCAAGACACCTATCACTACGTGGTCAGT
GAGCCACTGGGACGGAACAGCTATAAGGAGCGCTACCTGTCTGTGA
CAGGCCTGACCAGGTCTCGGGTGGACAGCTACTACGATGATG
GCTGCGAGCCCTGCGGGAACGACACCTTCAACCGAGAGGCCATT
GTCAGGTTCTCTCCCGTTACAGAGGTCAAGGAGTTGCCATTGTT
CCCCCTGCATGCCGCCCGGGGACGCACTAGCCGAGATCGACGCTCT
CTATGACGTCTACCTGGATGTCCAAGAGAAATGGGCTTGGAGGACG
TCATGTTGATGGCGACTTCAATGCGGGCTGCAAGCTATGTGAGACCT
CCCAGTGGTCATCCATCCGCCGTGGACAAGCCCCACCTTCAAGTGGC
TGATCCCCGACAGCGCTGACACCCACAGCTACACCCACGCACGTGCTC
ATGACAGGATCGTGGTTGCAAGGGATGCTCCGAGGCGCGTGTTC
CCGACTCGGCTTCCCTTAACCTCCAGGCTGCTATGGCCTGAGTG
ACCAACTGGCCAAGCCATCAGTGACCACTATCCAGTGGAGGTGATG
CTGAAGTGAAGCAGCCCTCCCCACACCAGTTGAAGTGCAG

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FIG. 74B

Met Arg Gly Met Lys Leu Leu Gly Ala Leu Leu Ala Leu Ala Leu Leu Gln
Gly Ala Val Ser Leu Lys Ile Ala Ala Phe Asn Ile Gln Thr Phe Gly Glu Thr Lys
Met Ser Asn Ala Thr Leu Val Ser Tyr Ile Val Gln Ile Leu Ser Arg Tyr Asp Ile
Ala Leu Val Gln Glu Val Arg Asp Ser His Leu Thr Ala Val Gly Lys Leu Leu
Asp Asn Leu Asn Gln Asp Ala Pro Asp Thr Tyr His Tyr Val Val Ser Glu Pro
Leu Gly Arg Asn Ser Tyr Lys Glu Arg Tyr Leu Phe Val Tyr Arg Pro Asp Gln
Val Ser Ala Val Asp Ser Tyr Tyr Asp Asp Gly Cys Glu Pro Cys Gly Asn
Asp Thr Phe Asn Arg Glu Pro Ala Ile Val Arg Phe Ser Arg Phe Thr Glu Val
Arg Glu Phe Ala Ile Val Pro Leu His Ala Ala Pro Gly Asp Ala Val Ala Glu Ile
Asp Ala Leu Tyr Asp Val Tyr Leu Asp Val Gln Glu Lys Trp Gly Leu Glu Asp
Val Met Leu Met Gly Asp Phe Asn Ala Gly Cys Ser Tyr Val Arg Pro Ser Gln
Trp Ser Ser Ile Arg Leu Trp Thr Ser Pro Thr Phe Gln Trp Leu Ile Pro Asp Ser
Ala Asp Thr Thr Ala Thr Pro Thr His Cys Ala Tyr Asp Arg Ile Val Val Ala Gly
Met Leu Leu Arg Gly Ala Val Val Pro Asp Ser Ala Leu Pro Phe Asp Phe Gln
Ala Ala Tyr Gly Leu Ser Asp Gln Leu Ala Gln Ala Ile Ser Asp His Tyr Pro Val
Glu Val Met Leu Lys

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FIG. 75A

GCTGCATCAGAAGAGGCCATCAAGCACATCACTGTCCCTTGCCATGG
CCCTGTGGATGCGCCTCCTGCCCCCTGCTGGCGCTGCTGGCCCTCTGGG
GACCTGACCCAGCCGCAGCCTTGTAACCAACACCTGTGCGGCTCAC
ACCTGGTGGAAAGCTCTACCTAGTGTGCGGGGAACGAGGCTTCTCT
ACACACCCAAGACCCGCCGGAGGCAGAGGACCTGCAGGTGGGGCA
GGTGGAGCTGGCGGGGGCCCTGGTGCAGGCAGCCTGCAGGCCCTGG
CCCTGGAGGGGTCCCTGCAGAAGCGTGGCATTGTGGAACAATGCTGT
ACCAGCATCTGCTCCCTCTACCAAGCTGGAGAACTACTGCAACTAGACG
CAGCCCCGAGGCAGGCCCCCCCACCCGCGCCTCCTGCACCGAGAGAGA
TGGAAATAAAGCCCTTGAACCAGC

FIG. 75B

Met Ala Leu Trp Met Arg Leu Leu Pro Leu Leu Ala Leu Leu Ala Leu Trp Gly
Pro Asp Pro Ala Ala Ala Phe Val Asn Gin His Leu Cys Gly Ser His Leu Val
Glu Ala Leu Tyr Leu Val Cys Gly Glu Arg Gly Phe Phe Tyr Thr Pro Lys Thr
Arg Arg Glu Ala Glu Asp Leu Gln Val Gly Gln Val Glu Leu Gly Gly Pro
Gly Ala Gly Ser Leu Gln Pro Leu Ala Leu Glu Gly Ser Leu Gln Lys Arg Gly Ile
Val Glu Gln Cys Cys Thr Ser Ile Cys Ser Leu Tyr Gln Leu Glu Asn Tyr Cys Asn

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FIG. 76A

ATGGGAGGTTGGTCTTCAAACCTCGACAAGGCATGGGACGAATCT
TTCTGTTCCAAATCCTCTGGATTCTTCCGATCACCGAGTTGGACCT
GCGTCGGAGCCAACCTCAAACAATCCAGATTGGGACTTCAACCCCAA
CAAGGATCACTGGCCAGAGGAATCAAGGTAGGGAGCGGGAGACTTC
GGGCCAGGGTCACCCCACACAGGGCTTTGGGGTGGAGGCC
TCAGGCTCAGGGCATATTGACAACAGTGCCAGCAGCGCTCCCTCCTG
TTTCACCAATCGCAGTCAGGAAGACAGCCTACTCCCATCTCTCCAC
CTCTAAGAGACAGTCATCCTCAGGCCATGCAGTGGAACTCCACAACA
TTCCACCAAGCTCTGCTAGATCCCAAGTGAGGGGCCTATAATTTCCT
GCTGGTGGCTCAGTTCCAGTAACAGTAAACCTGTTCCGACTACTGTC
TCACCCATATCGTCAATCTCTCGAGGACTGGGGACCCCTGACCGAAC
ATGGAGAGCACAAACATCAGGATTCCCTAGGACCCCTGCTCGTGTACA
GGCGGGGTTTCTTGTGACAAGAACTCTACAAATACCACAGAGTCT
AGACTCGTGGTGGACTCTCTCAATTCTCAAGGGGAGCACCCACGTG
TCCTGGCCAAAATTCGCAGTCCTCAACCTCCAATCACTACCAACCTC
TTGTCCTCCAATTGTCCTGGTTATCGCTGGATGTCTGCGGGCTTT
ATCATATTCTCTTCATCCTGCTATGCCATCTCTTGTGGITC
TTCTGGACTACCAAGGTATGTTGCCGTTGTCTACTTCCAGGAA
CATCAACTACCAAGCACGGGACCATGCAAGACCTGCACGATTCTGCT
CAAGGAACCTCTATGTTCCCTCTGCTGTACAAAACCTCGGAC
GGAAACTGCACCTGTTATCCCATCCATCTGGGCTTTCGCAAGA
TTCCATGGGAGTGGGCTCAGTCGGTCTCTGGCTCAGTTACTA
GTGCCATTGTTCACTGGTCTCGCAGGGCTTCCCCACTGTTGGCTTT
CAGTTATATGGATGATGTGGTATTGGGGCCAAGTCTGTACAAACATCT
TGAGTCCCTTTTACCTTATTACCAATTCTTGTCTTGGTATACT
ATTGAA

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FIG. 76B

Met Gly Gly Trp Ser Ser Lys Pro Arg Gln Gly Met Gly Thr Asn Leu Ser Val Pro Asn Pro Leu Gly Phe Phe Pro Asp His Gln Leu Asp Pro Ala Phe Gly Ala Asn Ser Asn Asn Pro Asp Trp Asp Phe Asn Pro Asn Lys Asp His Trp Pro Glu Ala Ile Lys Val Gly Ala Gly Asp Phe Gly Pro Gly Phe Thr Pro Pro His Gly Gly Leu Leu Gly Trp Ser Pro Gln Ala Gln Gly Ile Leu Thr Thr Val Pro Ala Ala Pro Pro Pro Val Ser Thr Asn Arg Gln Ser Gly Arg Gln Pro Thr Pro Ile Ser Pro Pro Leu Arg Asp Ser His Pro Gln Ala Met Gln Trp Asn Ser Thr Phe His Gln Ala Leu Leu Asp Pro Arg Val Arg Gly Leu Phe Pro Ala Gly Gly Ser Ser Ser Gly Thr Val Asn Pro Val Pro Thr Thr Val Ser Pro Ile Ser Ile Phe Ser Arg Thr Gly Asp Pro Ala Pro Asn Met Glu Ser Thr Thr Ser Gly Phe Leu Gly Pro Leu Leu Val Leu Gln Ala Gly Phe Phe Leu Leu Thr Arg Ile Leu Thr Ile Pro Gln Ser Leu Asp Ser Trp Trp Thr Ser Leu Asn Phe Leu Gly Gly Ala Pro Thr Cys Pro Gly Gln Asn Ser Gin Ser Pro Thr Ser Asn His Ser Pro Thr Ser Cys Pro Pro Ile Cys Pro Gly Tyr Arg Trp Met Cys Leu Arg Arg Phe Ile Ile Phe Leu Phe Ile Leu Leu Cys Leu Ile Phe Leu Val Leu Leu Asp Tyr Gln Gly Met Leu Pro Val Cys Pro Leu Leu Pro Gly Thr Ser Thr Thr Ser Cys Thr Gly Pro Cys Lys Thr Cys Thr Ile Pro Ala Gln Gly Thr Ser Met Phe Pro Ser Cys Cys Cys Thr Lys Pro Ser Asp Gly Asn Cys Thr Cys Ile Pro Ile Pro Ser Ser Trp Ala Phe Ala Arg Phe Leu Trp Glu Trp Ala Ser Val Arg Phe Ser Trp Leu Ser Leu Leu Val Pro Phe Val Gln Trp Phe Ala Gly Leu Ser Pro Thr Val Trp Leu Ser Val Ile Trp Met Met Trp Tyr Trp Gly Pro Ser Leu Tyr Asn Ile Leu Ser Pro Phe Leu Pro Leu Leu Pro Ile Phe Phe Cys Leu Trp Val Tyr Ile

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FIG. 77A

CGAACCACTAGGGCTCTGGACAGCTCACCTAGCTGCAATGGCTA
 CAGGCTCCGGACGTCCCTGCTCCTGGCTTTGGCCTGCTCTGCCTGC
 CCTGGCTTCAAGAGGGCAGTGCCTCCAACCATTCCCTATCCAGGC
 CTTTGACAAACGCTATGCTCCGCGCCATCGTCTGACCAGCTGGCCT
 TTGACACCTACCAGGAGTTGAAGAACGCTATATCCCAAAGGAACAG
 AAGTATTCAATTCTGCAGAACCCCCAGACCTCCCTGTTTCTCAGAG
 TCTATTCCGACACCCCTCCAACAGGGAGGAACACAACAGAAATCCAA
 CCTAGAGCTGCTCCGCATCTCCCTGCTGCTCATCCAGTCGGCTGGA
 GCCCGTGCAGTTCTCAGGGAGTGTCTCGCCAACAGCCTGGTGTACGG
 CGCCCTGACAGCAACGCTATGACCTCTAAAGGACCTAGAGGAAG
 GCATCCAAACGCTGATGGGGAGGGCTGGAAGATGGCAGCCCCCGGACT
 GGGCAGATCTCAAGCAGACCTACAGCAAGTTGACACAAACTCACA
 CAACGATGACGCACTACTCAAGAACTACGGGCTGCTACTGCTTCAG
 GAAGGACATGGCAAGGTGAGACATCTCGCGCATCGTCAGTGGCG
 CTCTGTGGAGGGCAGCTGTGGCTTAGCTGCCGGTGGCATCCCTG
 TGACCCCTCCCCAGTGCCTCTCTGGCCCTGGAAGTTGCCACTCCAGT
 GCCCACCGCCTTGTCTAATAAAATTAAGTTGCATC

FIG. 77B

Met Ala Thr Gly Ser Arg Thr Ser Leu Leu Leu Ala Phe Gly Leu Leu Cys Leu
 Pro Trp Leu Gln Glu Gly Ser Ala Phe Pro Thr Ile Pro Leu Ser Arg Pro Phe Asp
 Asn Ala Met Leu Arg Ala His Arg Leu His Gln Leu Ala Phe Asp Thr Tyr Gln
 Glu Phe Glu Glu Ala Tyr Ile Pro Lys Glu Gln Lys Tyr Ser Phe Leu Gln Asn Pro
 Gln Thr Ser Leu Cys Phe Ser Glu Ser Ile Pro Thr Pro Ser Asn Arg Glu Glu Thr
 Gln Gln Lys Ser Asn Leu Glu Leu Leu Arg Ile Ser Leu Leu Ile Gln Ser Trp
 Leu Glu Pro Val Gln Phe Leu Arg Ser Val Phe Ala Asn Ser Leu Val Tyr Gly Ala
 Ser Asp Ser Asn Val Tyr Asp Leu Leu Lys Asp Leu Glu Gln Gly Ile Gln Thr Leu
 Met Gly Arg Leu Glu Asp Gly Ser Pro Arg Thr Gly Gln Ile Phe Lys Gln Thr Tyr
 Ser Lys Phe Asp Thr Asn Ser His Asn Asp Asp Ala Leu Leu Lys Asn Tyr Gly
 Leu Leu Tyr Cys Phe Arg Lys Asp Met Asp Lys Val Glu Thr Phe Leu Arg Ile
 Val Gln CysArg Ser Val Glu Gly Ser Cys Gly Phe

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FIG. 78A

ATGTATTCCAATGTGATAGGAACGTAAACCTCTGGAAAAAGGAAGGT
TTATCTTTGTCCTGCTGCTCATGGCTCTGGACTGCGTGCACCTGT
CACGGGAGCCCTGTGGACATCTGCACAGCCAAGGCCGGACATTCC
CATGAATCCCAGTGCATTACCGCTCCCGGAGAAGAAGGCAACTG
AGGATGAGGGCTCAGAACAGAAGATCCCGAGGCCACCAACCGGCG
TGCTGGAACTGTCCAAGGCCAATTCCCGCTTGTACCACTTCTA
TCAGCACCTGGCAGATTCCAAGAACATGACAATGATAACATTCTCTGC
ACCCCTGAGTATCTCCACGGCTTGTATGACCAAGCTGGTGCCTG
TAATGACACCCCTCCAGCAACTGATGGAGGTATTAAGTTGACACCAT
ATCTGAGAAAACATCTGATCAGATCCACTTCTCTTGTCCAAACTGAA
CTGCCGACTCTATGAAAAGCCAACAAATCCTCCAAGTTAGTATCAGC
CAATCGCCTTTGGAGACAATCCCTACCTCAATGAGACCTACCA
GGACATCAGTGAAGTTGGTATATGGAGCCAAGCTCCAGGCCCTGGACT
TCAAGGAAAATGCAAGAGCAATCCAGAGCGCCATCAACAAATGGGTG
TCCAATAAGACCGAAGGCCGAATCACCAGTGTCAATTCTCGGAAGC
CATCAATGAGCTCACTGTTCTGGTGTGTTAACACCAATTACTCAA
GGGCTGTGGAAGTCAAAGTTCAAGCCCTGAGAACACAAGGAAGGAAC
TGTCTACAAGGCTGATGGAGAGTCCTGTTCAAGGCAACTCAGCATCTATGATGTACC
AGGAAGGCAAGTTCCGTTATCGGCGCGTGGCTGAAGGCACCCAGGTG
CTTGAGTTGCCCTCAAAGGTGATGACATCACCATGGTCCTCATCTTG
CCCAAGCTGAGAAGAGCCTGGCCAAGGTGGAGAAGGAACACTACCCCC
AGAGGTGCTGAGGAGTGGCTGGATGAATTGGAGGGAGATGATGCTGG
TGGTCCACATGCCCGCTCCGATTGAGGACGGCTTCAAGGCTGAAAGG
AGCAGCTGCAAGACATGGCCCTGTCGATCTGTTCAAGGCTGAAAGG
TCCAAACTCCCAGGTATTGTTGCAAGAGGCCAGATGACCTATGTC
TCAGATGCATTCCATAAGGCATTCTGAGGTAATGAAGAAGGAG
TGAAGCAGCTGCAAGTACCGCTGTTGATTGCTGGCCGTTGCTAA
CCCCAACAGGGTGAATTCAAGGCCAACAGGCCCTTCTGGTTTAT
AAGAGAAGTTCCCTGAAACACTATTATCTTCATGGGCAGAGTAGCCA
ACCCCTGTTAGTAAAGTAA

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FIG. 78B

Met Tyr Ser Asn Val Ile Gly Thr Val Thr Ser Gly Lys Arg Lys Val Tyr Leu Leu Ser Leu Leu Leu Ile Gly Phe Trp Asp Cys Val Thr Cys His Gly Ser Pro Val Asp Ile Cys Thr Ala Lys Pro Arg Asp Ile Pro Met Asn Pro Met Cys Ile Tyr Arg Ser Pro Glu Lys Lys Ala Thr Glu Asp Glu Gly Ser Glu Gln Lys Ile Pro Glu Ala Thr Asn Arg Arg Val Trp Glu Leu Ser Lys Ala Asn Ser Arg Phe Ala Thr Thr Phe Tyr Gln His Leu Ala Asp Ser Lys Asn Asp Asn Asn Ile Phe Leu Ser Pro Leu Ser Ile Ser Thr Ala Phe Ala Met Thr Lys Leu Gly Ala Cys Asn Asp Thr Leu Gln Gln Leu Met Glu Val Phe Lys Phe Asp Thr Ile Ser Glu Lys Thr Ser Asp Gln Ile His Phe Phe Phe Ala Lys Leu Asn Cys Arg Leu Tyr Arg Lys Ala Asn Lys Ser Ser Lys Leu Val Ser Ala Asn Arg Leu Phe Gly Asp Lys Ser Leu Thr Phe Asn Glu Thr Tyr Gln Asp Ile Ser Glu Leu Val Tyr Gly Ala Lys Leu Gln Pro Leu Asp Phe Lys Glu Asn Ala Glu Gln Ser Arg Ala Ala Ile Asn Lys Trp Val Ser Asn Lys Thr Glu Gly Arg Ile Thr Asp Val Ile Pro Ser Glu Ala Ile Asn Glu Leu Thr Val Leu Val Leu Val Asn Thr Ile Tyr Phe Lys Gly Leu Trp Lys Ser Lys Phe Ser Pro Glu Asn Thr Arg Lys Glu Leu Phe Tyr Lys Ala Asp Gly Glu Ser Cys Ser Ala Ser Met Met Tyr Gln Glu Gly Lys Phe Arg Tyr Arg Arg Val Ala Glu Gly Thr Gln Val Leu Glu Leu Pro Phe Lys Gly Asp Asp Ile Thr Met Val Leu Ile Leu Pro Lys Pro Glu Lys Ser Leu Ala Lys Val Glu Lys Glu Leu Thr Pro Glu Val Leu Gln Glu Trp Leu Asp Glu Leu Glu Glu Met Met Leu Val Val His Met Pro Arg Phe Arg Ile Glu Asp Gly Phe Ser Leu Lys Glu Gln Leu Gln Asp Met Gly Leu Val Asp Leu Phe Ser Pro Glu Lys Ser Lys Leu Pro Gly Ile Val Ala Glu Gly Arg Asp Asp Leu Tyr Val Ser Asp Ala Phe His Lys Ala Phe Leu Glu Val Asn Glu Gly Ser Glu Ala Ala Ala Ser Thr Ala Val Val Ile Ala Gly Arg Ser Leu Asn Pro Asn Arg Val Thr Phe Lys Ala Asn Arg Pro Phe Leu Val Phe Ile Arg Glu Val Pro Leu Asn Thr Ile Ile Phe Met Gly Arg Val Ala Asn Pro Cys Val Lys

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FIG. 79A

ATGGATTACTACAGAAAATATGCAGCTATCTTCTGGTCACATTGTCG
GTGTTCTGCATGTTCTCATTCCGCTCTGATGTGCAGGATGCCAG
AATGCACGCTACAGGAAAACCATTCTCTCCAGCCGGGTGCCCCA
ATACTTCAGTGCATGGGCTGCTGCTTCTCTAGAGCATATCCACTCCA
CTAAGGTCCAAGAAGACGATGTTGGTCCAAAAGAACGTCACCTCAGA
GTCCACTTGTGTAGCTAAATCATATAACAGGGTCACAGTAATGGG
GGGTTCAAAGTGGAGAACCAACACGGCGTGCCACTGCAGTACTTGT
ATTATCACAAATCTTAA

FIG. 79B

Met Asp Tyr Tyr Arg Lys Tyr Ala Ala Ile Phe Leu Val Thr Leu Ser Val Phe Leu
His Val Leu His Ser Ala Pro Asp Val Gln Asp Cys Pro Glu Cys Thr Leu Gln Glu
Asn Pro Phe Ser Gln Pro Gly Ala Pro Ile Leu Gln Cys Met Gly Cys Cys Phe
Ser Arg Ala Tyr Pro Thr Pro Leu Arg Ser Lys Lys Thr Met Leu Val Gln Lys Asn
Val Thr Ser Glu Ser Thr Cys Cys Val Ala Lys Ser Tyr Asn Arg Val Thr Val Met
Gly Gly Phe Lys Val Glu Asn His Thr Ala Cys His Cys Ser Thr Cys Tyr Tyr His
Lys Ser

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FIG. 79C

ATGGAGATGTTCCAGGGGCTGCTGCTGCTGCTGAGCATGGGC
GGGACATGGGCATCCAAGGAGCCGCTTCGGCCACGGTGCCGCCCAT
CAATGCCACCCCTGGCTGTGGAGAAGGAGGGCTGCCCGTGTGCATCA
CCGTCACACCAACCATCTGTGCCGGCTACTGCCCCACCATGACCCGCG
TGCTGCAGGGGTCTGCCGGCCCTGCCTCAGGTGGTGTGCAACTACC
GCGATGTGCGCTTCGAGTCCATCCGGCTCCCTGGCTGCCGCGCGCG
TGAACCCCGTGGTCTCTACGCCGTGGCTCTCAGCTGTCATGTGCAC
TCTGCCGCGCAGCACCATGACTGCCGGGGTCCAAGGACCAAGCCC
TTGACCTGTGATGACCCCCGCTTCCAGGACTCCTTCCCAAAGGCC
CCTCCCCCAGGCTTCCAAGCCATCCGACTCCGGGGCCCTCGGAC
ACCCCGATCCTCC CACAATAA

FIG. 79D

Met Glu Met Phe Gln Gly Leu Leu Leu Leu Leu Ser Met Gly Gly Thr
Trp Ala Ser Lys Glu Pro Leu Arg Pro Arg Cys Arg Pro Ile Asn Ala Thr Leu Ala
Val Glu Lys Glu Gly Cys Pro Val Cys Ile Thr Val Asn Thr Thr Ile Cys Ala Gly
Tyr Cys Pro Thr Met Thr Arg Val Leu Gln Gly Val Leu Pro Ala Leu Pro Gln Val
Val Cys Asn Tyr Arg Asp Val Arg Phe Glu Ser Ile Arg Leu Pro Gly Cys Pro Arg
Gly Val Asn Pro Val Val Ser Tyr Ala Val Ala Leu Ser Cys Gln Cys Ala Leu Cys
Arg Arg Ser Thr Thr Asp Cys Gly Gly Pro Lys Asp His Pro Leu Thr Cys Asp
Asp Pro Arg Phe Gln Asp Ser Ser Ser Lys Ala Pro Pro Pro Ser Leu Pro Ser
Pro Ser Arg Leu Pro Gln Pro Ser Asp Thr Pro Ile Leu Pro Gln

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FIG. 80A

ATGCGTCCCCCTGCGCCCGCGCCGCTGCTGGCGCTCTGGCCTCG
CTCCGGCGCGCCCCCGGTGGCCCGCGAGGCCCGCACCTGGT
GCAGGGTGGACCGCGCCCGCGCTGTGGCCCTGCGCGCTCTGGA
GGAGCACAGGCTCTGGCCCCCGCTGCCACACAGCCAGGCTGACCAG
TACGTCTCAGTGGGACCAGCAGCTCAACCTCGCCTATGTGGCGCC
GTCCCCCACCGCGGCATCAAGCAGGCTGGAGCCACTGGCTGCTGGA
GCTTGTCAACCACCAGGGGTCCACTGGACGGGGCTGAGCTACA
ACTCACCCACCTGGACGGGTACTTGACCTTCTCAGGGAGAACAGCTC
TCCCAGGGTTTGAGCTGATGGGAGCGCCCTGGGCCACTTCACTGACT
TTGAGGACAAGCAGCAGGTGTTGAGTGGAAAGGACTTGGTCTCCAGC
CTGGCCAGGAGATACTCGGTAGGTACGGACTGGCATGTTCAA
GTGGAACCTCGAGACGTGGAATGAGCCAGACCACGACTTGACA
ACGTCCTCCATGACCATGCAAGGCTCTGAACACTACGATGCCCTGCT
CGGAGGGTCTCGCGCCGCCAGCCCCGCCCTGCGGCTGGAGGCC
GGCAGACTCTTCCACACCCCAACCGCGATCCCCGCTGAGCTGGGCC
CTGCGCCACTGCCACGACGGTACCAACTCTTCACTGGGAGGCC
CGTGCCTGGACTACATCTCCCTCACAGGAAGGGTGCAGCAGCT
CCATCTCATCTGGAGCAGGAGAACGGTCTGCAGCAGATCCGG
CAGCTCTTCCCCAAGTTCGGGACACCCCCATTACAACGACGAGGC
GACCCGCTGGTGGCTGGCCACAGCGTGGAGGGCGGACGT
GACCTACGCGGCCATGGTGGTAAGGTACATCGCGCAGCATCAGAAC
TGCTACTGGCAACACCACCTCCGCCCTTACCGCTCTGAGCA
ACGACAATGCCCTCTGAGCTACCACCGCACCCCTTCGCGCAGCGA
CGCTCACCGCGCCTTCAAGGTCAACACACCCCGCCCGCACGTG
CAGCTTGTGCGAAGCCGGTCTCACGGCCATGGGCTGCTGGCCT
GCTGGATGAGGAGCAGCTCTGGCCGAAGTGTGCGCAGGCC
TCCTGGACAGCAACCACACGGTGGCGCTCTGGCCAGCGCC
CCCCAGGGCCCGCCGACCCCTGGCGCGCCGCGTGTGATCTACGC
GAGCGACACCCCGCGCCACCCCAACCGCAGCGTCGCGGTGACCC
TGGCGCTGCGGGGGTGCCTCCCCCGCCGGCTGGTACGTCACG
CGCTACCTGGACAACAGGGCTCTGCGACCCCGACGGCGAGTGGCG
CCTGGCCGGCCGCTTCCCCACGGCAGAGCAGTCCGGCGCATGC
GCGCGCTGAGGACCCGGTGGCCCGCCGCCCCCTAACCGC
GGCGGCCGCTGACCCCTGCGCCCGCGCTGCGGTGCGCTGCTT
CTGGTGCACGTGTGTGCGCCGGAGAACGCC
GGCGCTCCCGCCGCCCCCTGACCCCAAGGGCAGCTGGTCTGGTCTG
GTGGATGAACACGTGGGCTCCAAGTGCCTGTGACATACGAGATCC
AGTTCTCTCAGGACGGTAAGGCGTACACCCCGGTACAGCAGGAAGCCA
TCGACCTTCAACCTCTTGTGTTCAAGCCAGACACAGGTGCTGCTCT
GGCTCTACCGAGTTGCGACCCCTGGACTACTGGGCCGACCAAGGCC
CTTCTCGGACCTCTGCGCTACCTGGAGGTCCCTGTGCCAAGAGGCC
CCCATCCCCGGCAATCCAT GA

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FIG. 80B

Met Arg Pro Leu Arg Pro Arg Ala Ala Leu Leu Ala Ser Leu Leu Ala Ala Pro Pro Val Ala Pro Ala Glu Ala Pro His Leu Val Gln Val Asp Ala Ala Arg Ala Leu Trp Pro Leu Arg Arg Phe Trp Arg Ser Thr Gly Phe Cys Pro Pro Leu Pro His Ser Gln Ala Asp Gln Tyr Val Leu Ser Trp Asp Gln Gln Leu Asn Leu Ala Tyr Val Gly Ala Val Pro His Arg Gly Ile Lys Gln Val Arg Thr His Trp Leu Leu Glu Leu Val Thr Thr Arg Gly Ser Thr Gly Arg Gly Leu Ser Tyr Asn Phe Thr His Leu Asp Gly Tyr Leu Asp Leu Leu Arg Glu Asn Gln Leu Pro Gly Phe Glu Leu Met Gly Ser Ala Ser Gly His Phe Thr Asp Phe Glu Asp Lys Gln Gln Val Phe Glu Trp Lys Asp Leu Val Ser Ser Leu Ala Arg Arg Tyr Ile Gly Arg Tyr Gly Leu Ala His Val Ser Lys Trp Asn Phe Glu Thr Trp Asn Glu Pro Asp His His Asp Phe Asp Asn Val Ser Met Thr Met Gln Gly Phe Leu Asn Tyr Tyr Asp Ala Cys Ser Glu Gly Leu Arg Ala Ala Ser Pro Ala Leu Arg Leu Gly Pro Gly Asp Ser Phe His Thr Pro Pro Arg Ser Pro Leu Ser Trp Gly Leu Leu Arg His Cys His Asp Gly Thr Asn Phe Phe Thr Gly Glu Ala Gly Val Arg Leu Asp Tyr Ile Ser Leu His Arg Lys Gly Ala Arg Ser Ser Ile Ser Ile Leu Glu Gln Glu Lys Val Val Ala Gln Gln Ile Arg Gln Leu Phe Pro Lys Phe Ala Asp Thr Pro Ile Tyr Asn Asp Glu Ala Asp Pro Leu Val Gly Trp Ser Leu Pro Gln Pro Trp Arg Ala Asp Val Thr Tyr Ala Ala Met Val Val Lys Val Ile Ala Gln His Gln Asn Leu Leu Ala Asn Thr Thr Ser Ala Phe Pro Tyr Ala Leu Leu Ser Asn Asp Asn Ala Phe Leu Ser Tyr His Pro His Pro Phe Ala Gln Arg Thr Leu Thr Ala Arg Phe Gln Val Asn Asn Thr Arg Pro Pro His Val Gln Leu Leu Arg Lys Pro Val Leu Thr Ala Met Gly Leu Leu Ala Leu Leu Asp Glu Glu Gln Leu Trp Ala Glu Val Ser Gln Ala Gly Thr Val Leu Asp Ser Asn His Thr Val Gly Val Leu Ala Ser Ala His Arg Pro Gln Gly Pro Ala Asp Ala Trp Arg Ala Ala Val Leu Ile Tyr Ala Ser Asp Asp Thr Arg Ala His Pro Asn Arg Ser Val Ala Val Thr Leu Arg Leu Arg Gly Val Pro Pro Gly Pro Gly Leu Val Tyr Val Thr Arg Tyr Leu Asp Asn Gly Leu Cys Ser Pro Asp Gly Glu Trp Arg Arg Leu Gly Arg Pro Val Phe Pro Thr Ala Glu Gln Phe Arg Arg Met Arg Ala Ala Glu Asp Pro Val Ala Ala Pro Arg Pro Leu Pro Ala Gly Gly Arg Leu Thr Leu Arg Pro Ala Leu Arg Leu Pro Ser Leu Leu Leu Val His Val Cys Ala Arg Pro Glu Lys Pro Pro Gly Gln Val Thr Arg Leu Arg Ala Leu Pro Leu Thr Gln Gly Gln Leu Val Leu Val Trp Ser Asp Glu His Val Gln Ser Lys Cys Leu Trp Thr Tyr Glu Ile Gln Phe Ser Gln Asp Gly Lys Ala Tyr Thr Pro Val Ser Arg Lys Pro Ser Thr Phe Asn Leu Phe Val Phe Ser Pro Asp Thr Gly Ala Val Ser Gly Ser Tyr Arg Val Arg Ala Leu Asp Tyr Trp Ala Arg Pro Gly Pro Phe Ser Asp Pro Val Pro Tyr Leu Glu Val Pro Val Pro Arg Gly Pro Pro Ser Pro Gly Asn Pro

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FIG. 81A

ATGCAGCTGAGGAACCCAGAACTACATCTGGCTGCGCCTGCGCT
TCGCTTCCCTGGCCCTCGTTCTGGACATCCCTGGGCTAGAGCACT
GGACAATGGATTGGCAAGGACGCCCTACCATGGGCTGGCTGACTGG
AGCGCTTCATGTGCAACCTTGTACTGCCAGGAAGAGCCAGATTCTGC
ATCACTGAGAAGCTCTTCATGGAGATGGCAGAGCTCATGGTCTCAGA
AGGCTGGAAGGATGCAGGTTATGAGTACCTCTGCATTGATGACTGTTG
GATGGCTCCCCAAAGAGATTAGAAGGCAGACTCAGGCAGACCCCTC
AGCGCTTCTCATGGGATTGCCAGCTAGCTAATTATGTTACAGCA
AAGGACTGAAGCTAGGGATTATGCAGATGTTGAAATAAAACCTGC
GCAGGCTCCCTGGGAGTTTGGATACTACGACATTGATGCCAGACC
TTGCTGACTGGGAGTTGAGTACTGCTAAAATTGATGTTGTTACTGT
GACAGTTGGAAAATTGGCAGATGGTTATAAGCACATGTCCTTGGCC
CTGAATAGGACTGGCAGAAGCATTGTTACTCCTGTGAGTGGCTCTT
TATATGTGCCCTTCAAAAGCCAATTATACAGAAATCCGACAGTAC
TGCACATCACTGGCGAAATTGCTGACATTGATGATTCTGGAAAAGT
ATAAAAGAGTATCTGGACTGGACATCTTAAACCAGGAGAGAATTGTT
GATGTTGCTGGACCAGGGGTTGGAATGACCCAGATATGTTAGTGT
TGGCAACTTGGCCTCAGCTGAATCAGCAAGTAACTCAGATGCCCT
CTGGGCTATCATGGCTGCTCCTTATTCATGTCTAATGACCTCCGACA
CATCAGCCCTCAAGCCAAAGCTCTCCCTCAGGATAAGGACGTAATTGC
CATCAATCAGGACCCCTGGCAAGCAAGGGTACCGAGCTTAGCAGG
GAGACAACATTGAAGTGTGGGAACGACCTCTCAGGCTTAGCCTGG
GCTGTAGCTATGATAAACCGGCAGGAGATTGGTGGACCTCGCTTAT
ACCATCGCAGTTGCTTCCCTGGTAAGGAGTGGCCTGTAATCCTGCC
TGCTTCATCACACAGCTCCCTGTGAAAAGGAAGCTAGGGTCTAT
GAATGGACTCAAGGTTAAGAAGTCACATAAAATCCCACAGGCACTGT
TTGCTTCAGCTAGAAAATACAATGCAGATGTCATTAAAAGACTTACT
TTAA.

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FIG. 81B

Met Gln Leu Arg Asn Pro Glu Leu His Leu Gly Cys Ala Leu Ala Leu Arg Phe
Leu Ala Leu Val Ser Trp Asp Ile Pro Gly Ala Arg Ala Leu Asp Asn Gly Leu Ala
Arg Thr Pro Thr Met Gly Trp Leu His Trp Glu Arg Phe Met Cys Asn Leu Asp
Cys Gln Glu Glu Pro Asp Ser Cys Ile Ser Glu Lys Leu Phe Met Glu Met Ala Glu
Leu Met Val Ser Glu Gly Trp Lys Asp Ala Gly Tyr Glu Tyr Leu Cys Ile Asp Asp
Cys Trp Met Ala Pro Gln Arg Asp Ser Glu Gly Arg Leu Gln Ala Asp Pro Gln
Arg Phe Pro His Gly Ile Arg Gln Leu Ala Asn Tyr Val His Ser Lys Gly Leu Lys
Leu Gly Ile Tyr Ala Asp Val Gly Asn Lys Thr Cys Ala Gly Phe Pro Gly Ser Phe
Gly Tyr Tyr Asp Ile Asp Ala Gln Thr Phe Ala Asp Trp Gly Val Asp Leu Leu Lys
Phe Asp Gly Cys Tyr Cys Asp Ser Leu Glu Leu Ala Asp Gly Tyr Lys His
Met Ser Leu Ala Leu Asn Arg Thr Gly Arg Ser Ile Val Tyr Ser Cys Glu Trp Pro
Leu Tyr Met Trp Pro Phe Gln Lys Pro Asn Tyr Thr Glu Ile Arg Gln Tyr Cys Asn
His Trp Arg Asn Phe Ala Asp Asp Ile Asp Asp Ser Trp Lys Ser Ile Lys Ser Ile Leu
Asp Trp Thr Ser Phe Asn Gln Glu Arg Ile Val Asp Val Ala Gly Pro Gly Gly Trp
Asn Asp Pro Asp Met Leu Val Ile Gly Asn Phe Gly Leu Ser Trp Asn Gln Gln
Val Thr Gln Met Ala Leu Trp Ala Ile Met Ala Ala Pro Leu Phe Met Ser Asn Asp
Leu Arg His Ile Ser Pro Gln Ala Lys Ala Leu Leu Gln Asp Lys Asp Val Ile Ala
Ile Asn Gln Asp Pro Leu Gly Lys Gly Tyr Gln Leu Arg Gln Gly Asp Asn
Phe Glu Val Trp Glu Arg Pro Leu Ser Gly Leu Ala Trp Ala Val Ala Met Ile Asn
Arg Gln Glu Ile Gly Gly Pro Arg Ser Tyr Thr Ile Ala Val Ala Ser Leu Gly Lys
Gly Val Ala Cys Asn Pro Ala Cys Phe Ile Thr Gln Leu Leu Pro Val Lys Arg Lys
Leu Gly Phe Tyr Glu Trp Thr Ser Arg Leu Arg Ser His Ile Asn Pro Thr Gly Thr
Val Leu Leu Gln Leu Glu Asn Thr Met Gln Met Ser Leu Lys Asp Leu Leu

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FIG. 82A

ATGGCGCCCGTGCCTGCTGGGCCGCTGGCCGTCGGACTGGAGCT
CTGGGCTCGGGCGCACGCCCTGGCCCGGAGCACATGCCGCTCAGAGAATACTATGACC
CGCCCCGGAGGCCGGAGCACATGCCGCTCAGAGAATACTATGACC
AGACAGCTCAGATGTGCTGCAGCAAATGCTCGCCGGGCAACATGCA
AAAGTCTCTGTACCAAGACCTCGACACCGTGTGTGACTCCTGTGAG
GACAGCACATACACCCAGCTCTGAACTGGGTTCCCGAGTGCTTGAG
CTGTGGCTCCCGCTGTAGCTCTGACCAGGTGGAACCTCAAGCCTGCAC
TCGGAACAGAACCGCATTGACCTGCAGGCCGGCTGGTACTGCG
CGCTGAGCAAGCAGGAGGGTGCCTGTGCGCGCCGCTGCGCAAG
TGCCGCCGGGCTTCGGCTGCCAGACCAAGGAACCTGAAACATCAGA
CGTGGTGTGCAAGCCCTGTGCCCCGGGAGCTTCTCCAACACGACTTC
ATCCACGGATATTGCAAGCCCCACCAAGATCTGAACTGTGGCCAT
CCCTGGGAATGCAAGCATGGATGCACTGTCACGTCCACGCCCCA
CCCGGAGTATGGCCCAGGGCAGTACACTTACCCAGCCAGTGTCC
ACACGATCCCAACACACGCCAGCAACTCCAGAACCCAGCACTGCTCC
AAGCACCTCTTCTGCTCCCAATGGCCCCAGCCCCCAGCTGAAGG
GAGCACTGGCACTTCGCTCTCCAGTTGACTGATTGTGGGTGTGAC
AGCCTGGGTCTACTAATAATAGGAGTGGTGAACCTGTGTCATCATGAC
CCAGGTGAAAAAGAACCCCTTGTGCCAGAGAGAGAACGCCAGGTG
CTCACTTGCCTGGCAATAAGGCCGGGTACACAGGGCCCCAGCAG
CAGCACCTGCTGATCACAGCGCCGAGCTCCAGCAGCAGCTCCCTGGA
GAGCTGGCCAGTGCCTGGACAGAAGGGGCCACTCGGAACCAGC
CACAGGCACCAGGCCTGGAGGCCAGTGGGGCCGGGGAGGCCGGGC
CAGCACCGGGAGCTCAGATTCTCCCTGGTGGCCATGGGACCCAGG
TCAATGTCACCTGCATCGTAACGTCCTGTAGCAGCTCTGACCACAGCT
CACAGTGCCTCCCAAGGCCAGCTCCACAATGGGAGACACAGATTCC
AGCCCCCTCGGAGTCCCAGAAGGACGAGCAGGTCCCTCTCCAAGGA
GGAATGTGCCTTCGGTCAGAGCTGGAGAGGCCAGAGAACCCCTGCTGG
GGAGCACCAGAAGAGAACGCCCTGCCCTTGGAGTGCCTGATGCTGGG
ATGAAGCCCAGTTAACCAAGGCCGGTGTGGCTGTGTCGTAGCCAAGG
TGGGCTGAGCCCTGGCAGGATGACCCCTGCGAAGGGCCCTGGTCCCT
CCAGGC

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FIG. 82B

Met Ala Pro Val Ala Val Trp Ala Ala Leu Ala Val Gly Leu Glu Leu Trp Ala Ala Ala His Ala Leu Pro Ala Gln Val Ala Phe Thr Pro Tyr Ala Pro Glu Pro Gly Ser Thr Cys Arg Leu Arg Glu Tyr Tyr Asp Gln Thr Ala Gln Met Cys Cys Ser Lys Cys Ser Pro Gly Gln His Ala Lys Val Phe Cys Thr Lys Thr Ser Asp Thr Val Cys Asp Ser Cys Glu Asp Ser Thr Tyr Thr Gln Leu Trp Asn Trp Val Pro Glu Cys Leu Ser Cys Gly Ser Arg Cys Ser Ser Asp Gln Val Glu Thr Gln Ala Cys Thr Arg Glu Gln Asn Arg Ile Cys Thr Cys Arg Pro Gly Trp Tyr Cys Ala Leu Ser Lys Gln Glu Gly Cys Arg Leu Cys Ala Pro Leu Arg Lys Cys Arg Pro Gly Phe Gly Val Ala Arg Pro Gly Thr Glu Thr Ser Asp Val Val Cys Lys Pro Cys Ala Pro Gly Thr Phe Ser Asn Thr Thr Ser Ser Thr Asp Ile Cys Arg Pro His Gln Ile Cys Asn Val Val Ala Ile Pro Gly Asn Ala Ser Met Asp Ala Val Cys Thr Ser Thr Ser Pro Thr Arg Ser Met Ala Pro Gly Ala Val His Leu Pro Gln Pro Val Ser Thr Arg Ser Gln His Thr Gln Pro Thr Pro Glu Pro Ser Thr Ala Pro Ser Thr Ser Phe Leu Leu Pro Met Gly Pro Ser Pro Pro Ala Glu Gly Ser Thr Gly Asp Phe Ala Leu Pro Val Gly Leu Ile Val Gly Val Thr Ala Leu Gly Leu Ile Ile Gly Val Val Asn Cys Val Ile Met Thr Gln Val Lys Lys Pro Leu Cys Leu Gln Arg Glu Ala Lys Val Pro His Leu Pro Ala Asp Lys Ala Arg Gly Thr Gln Gly Pro Glu Gin Gin His Leu Leu Ile Thr Ala Pro Ser Ser Ser Ser Ser Leu Glu Ser Ser Ala Ser Ala Leu Asp Arg Arg Ala Pro Thr Arg Asn Gln Pro Gln Ala Pro Gly Val Glu Ala Ser Gly Ala Gly Glu Ala Arg Ala Ser Thr Gly Ser Ser Asp Ser Pro Gly Gly His Gly Thr Gln Val Asn Val Thr Cys Ile Val Asn Val Cys Ser Ser Ser Asp His Ser Ser Gln Cys Ser Ser Gln Ala Ser Ser Thr Met Gly Asp Thr Asp Ser Ser Pro Ser Glu Ser Pro Lys Asp Glu Gln Val Pro Phe Ser Lys Glu Glu Cys Ala Phe Arg Ser Gln Leu Glu Thr Pro Glu Thr Leu Leu Gly Ser Thr Glu Glu Lys Pro Leu Pro Leu Gly Val Pro Asp Ala Gly Met Lys Pro Ser

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FIG. 83A

Asp Ile Gln Met Thr Gin Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gin Asp Val Asn Thr Ala Val Ala Trp Tyr Gin Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ser Ala Ser Phe Leu Tyr Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Arg Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gin Gin His Tyr Thr Thr Pro Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys

FIG. 83B

Glu Val Gln Leu Val Glu Ser Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Asn Ile Lys Asp Thr Tyr Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ala Arg Ile Tyr Pro Thr Asn Gly Tyr Thr Arg Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Ala Asp Thr Ser Lys Asn Thr Ala Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ser Arg Trp Gly Gly Asp Gly Phe Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser

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FIG. 84A

Gin Val Thr Leu Arg Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gin Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Thr Ser Gly Met Ser Val Gly Trp Ile Arg Gin Pro Ser Gly Lys Ala Leu Glu Trp Leu Ala Asp Ile Trp Trp Asp Asp Lys Lys Asp Tyr Asn Pro Ser Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gin Val Val Leu Lys Val Thr Asn Met Asp Pro Ala Asp Thr Ala Thr Tyr Tyr Cys Ala Arg Ser Met Ile Thr Asn Trp Tyr Phe Asp Val Trp Gly Ala Gly Thr Thr Val Thr Val Ser Ser

FIG. 84B

Asp Ile Gln Met Thr Gin Ser Pro Ser Thr Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Lys Cys Gin Leu Ser Val Gly Tyr Met His Trp Tyr Gin Gln Lys Pro Gly Lys Ala Pro Lys Leu Trp Ile Tyr Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Asp Asp Phe Ala Thr Tyr Tyr Cys Phe Gin Gly Ser Gly Tyr Pro Phe Thr Phe Gly Gly Thr Lys Leu Glu Ile Lys

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FIG. 85A

GACATCTGCTGACTCAGTCTCCAGCCATCCTGCTGTGAGTCCAGGA
 GAAAGAGTCAGTTCTCCTGCAGGGCCAGTCAGTCGTTGGCTCAAGC
 ATCCACTGGTATCAGCAAAGAACAAATGGTCTCCAAGGCTCTCATA
 AAGTATGCTTCTGAGTCTATGTCAGGGATCCCTCCAGGTTAGTGGC
 AGTGGATCAGGGACAGATTACTCTAGCATCACACTGTGGAGTC
 GAAGATATTGCAAGATTACTGTCAACAAAGTCATAGCTGCCATT
 ACCTCGGCTCGGGGACAAATTGGAAGTAAAAGAAGTGAAGCTTGA
 GGAGTCTGGAGGGAGGCTTGGTGCACACTGGAGGATCCATGAAACTCT
 CCTGTGTTGCCTCTGGATTCACTTCAGTAACCCTGGAGTGAACCTGG
 TCCGCCAGTCTCCAGAGAAGGGGCTTGAAGTGGGTTGCTGAAATTAGA
 TCAAAATCTATTAAATTCTGCAACACATTATCGGGAGTCTGTGAAAGGG
 AGGTTCAACCCTCAAGAGATGATTCAAAGTGTGTCTACCTGCAA
 ATGACCGACTTAAGAACTGAAGACACTGGCGTTATTACTGTTCCAGG
 AATTACTACGGTAGTACCTACGACTACTGGGGCCAAGGCACCACTCTC
 ACAGTCTCC

FIG. 85B

Asp Ile Leu Leu Thr Gln Ser Pro Ala Ile Leu Ser Val Ser Pro Gly Glu Arg Val
 Ser Phe Ser Cys Arg Ala Ser Gln Phe Val Gly Ser Ser Ile His Trp Tyr Gln Gln
 Arg Thr Asn Gly Ser Pro Arg Leu Leu Ile Lys Tyr Ala Ser Glu Ser Met Ser Gly
 Ile Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Ser Ile Asn
 Thr Val Glu Ser Glu Asp Ile Ala Asp Tyr Tyr Cys Gln Gln Ser His Ser Trp Pro
 Phe Thr Phe Gly Ser Gly Thr Asn Leu Glu Val Lys Glu Val Lys Leu Glu Glu Ser
 Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Met Lys Leu Ser Cys Val Ala Ser Gly
 Phe Ile Phe Ser Asn His Trp Met Asn Trp Val Arg Gln Ser Pro Glu Lys Gly Leu
 Glu Trp Val Ala Glu Ile Arg Ser Lys Ser Ile Asn Ser Ala Thr His Tyr Ala Glu
 Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Ser Ala Val Tyr
 Leu Gln Met Thr Asp Leu Arg Thr Glu Asp Thr Gly Val Tyr Tyr Cys Ser Arg
 Asn Tyr Tyr Gly Ser Thr Tyr Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser

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FIG. 86A

ATGGAGACAGACACACTCCTGTTATGGGTGCTGCTGCTGGGTTCCA
GGTCCACTGGTGACGTCAAGCGAGGGCCCCGGAGCCTGCGGGGAGC
GGACGCGCCAGCCCCCAGCCCTGCGTCCCGGGCGAGTGCTCGACC
TGCTGGTCCGCCACTGCGTGGCCTGCGGGCTCTGCGCACCCGCGGC
CGAAACCGGCCGGGGCCAGCAGCCCTGCGCCAGGACGGCGCTGCAG
CCGAGGAGTCGGTGGCGCGGGGGCGGGCGAGGCAGGCGGTGACA
AAACTCACACATGCCAACCGTCCCCAGCACCTGAACCTCTGGGGGA
CCGTCAAGTCTCCTCTTCCCCAAAACCCAAGGACACCCATGATC
TCCCGGACCCCTGAGGTCAACATGCGTGGTGGTGACGTGAGCCACGA
AGACCTGAGGTCAAGTCAACTGGTACGTGGACGGCGTGAGGTG
ATAATGCCAAGACAAAGCCGGGGAGGAGCAGTACAACAGCACGTA
CCGTGTGGTCAGCTCTCACCGTCTGCACCAAGGACTGGCTGAATGG
CAAGGAGTACAAGTCAAGGTCTCAACAAAGCCCTCCAGCCCCA
TCGAGAAAACCATCTCAAAGCCAAGGGCAGCCCCGAGAACCCACAG
GTGTACACCTGCCCCATCCGGGATGAGCTGACCAAGAACCAAGGT
CAGCCTGACCTGCTGGTCAAAGGCTCTATCCAGCGACATGCCGT
GGAGTGGAGAGCAATGGCAGCCGAGAACAACTACAAGACCACG
CCTCCCGTGGACTCCGACGGCTCTTCTTCTACAGCAAGCTC
ACCGTGGACAAGAGCAGGTGGCAGCAGGGAAACGTCTTCTCATGCTC
CGTATGCATGAGGCTGACAAACCAACTACACGCAGAAGAGCCTCT
CCCTGTCTCCCCGGAAATGA

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FIG. 86B

Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Trp Val Pro Gly Ser Thr Gly Asp Val Arg Arg Gly Pro Arg Ser Leu Arg Gly Arg Asp Ala Pro Ala Pro Thr Pro Cys Val Pro Ala Glu Cys Phe Asp Leu Leu Val Arg His Cys Val Ala Cys Gly Leu Leu Arg Thr Pro Arg Pro Lys Pro Ala Gly Ala Ser Ser Pro Ala Pro Arg Thr Ala Leu Gln Pro Gln Glu Ser Val Gly Ala Gly Ala Gly Glu Ala Ala Val Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Pro Gly Lys

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FIG. 87

Asp Ile Gin Met Thr Gin Thr Ser Ser Leu Ser Ala Ser Leu Gly Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gin Asp Ile Asn Asn Tyr Leu Asn Trp Tyr Gin Gln Lys Pro Asp Gly Ile Val Lys Leu Leu Ile Tyr Tyr Thr Ser Thr Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gin Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Trp Thr Phe Gly Gly Thr Lys Leu Glu Ile Lys

FIG. 88

Gln Val Gin Leu Gln Gln Ser Gly Ala Glu Leu Val Gly Pro Gly Thr Ser Val Arg Val Ser Cys Lys Ala Ser Gly Tyr Ala Phe Thr Asn Tyr Leu Ile Glu Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile Gly Val Ile Tyr Pro Gly Ser Gly Gly Thr Asn Tyr Asn Glu Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Thr Thr Ala Tyr Met Gin Leu Ser Ser Leu Thr Ser Asp Asp Ser Ala Val Tyr Phe Cys Ala Arg Arg Asp Gly Asn Tyr Gly Trp Phe Ala Tyr Trp Gly Arg Gly Thr Leu Val Thr Val Ser Ala

FIG. 89

Asp Ile Gin Met Thr Gin Thr Pro Ser Thr Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gin Asp Ile Asn Asn Tyr Leu Asn Trp Tyr Gin Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Tyr Thr Ser Thr Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro Asp Asp Phe Ala Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Val Lys

FIG. 90

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ala Phe Thr Asn Tyr Leu Ile Glu Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile Gly Val Ile Tyr Pro Gly Ser Gly Gly Thr Asn Tyr Asn Glu Lys Phe Lys Gly Arg Val Thr Leu Thr Val Asp Glu Ser Thr Asn Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Phe Cys Ala Arg Arg Asp Gly Asn Tyr Gly Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser

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FIG. 91

Asp Ile Gln Met Thr Gln Thr Pro Ser Thr Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asp Ile Asn Asn Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Tyr Thr Ser Thr Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro Asp Asp Phe Ala Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Val Lys Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys

FIG. 92

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ala Phe Thr Asn Tyr Leu Ile Glu Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile Gly Val Ile Tyr Pro Gly Ser Gly Gly Thr Asn Tyr Asn Glu Lys Phe Lys Gly Arg Val Thr Leu Thr Val Asp Glu Ser Thr Asn Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Phe Cys Ala Arg Arg Asp Gly Asn Tyr Gly Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly

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FIG. 93A

ATGGATTTCAAGGTGCAGATTATCAGCTTCTGCTAATCAGTGCTTCA
GTCATAATGTCCAGAGGGCAAAATTGTTCTCTCCAGTCTCCAGCAATC
CTGCTGCATCTCCAGGGAGAAGGTACAATGACTTGCAGGGCCAG
CTCAAGTGTAAAGTTACATCCACTGGTTCAGCAGAAGGCCAGGATCCTC
CCCCAAACCCCTGGATTATGCCACATCCAACCTGGCTTCTGGAGTCCC
TGTTCGCTTCAGTGGCAGTGGGTCTGGGACTTCTTACTCTCACAAT
CAGCAGAGTGGAGGCTGAAGATGCTGCCACTTATTACTGCCAGCAGT
GGACTAGTAACCCACCCACGTTGGAGGGGGACCAAGCTGGAAATC
AAA

FIG. 93B

Met Asp Phe Gln Val Gln Ile Ile Ser Phe Leu Leu Ile Ser Ala Ser Val Ile Met Ser
Arg Gly Gln Ile Val Leu Ser Gln Ser Pro Ala Ile Leu Ser Ala Ser Pro Gly Glu
Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser Val Ser Tyr Ile His Trp Phe Gln
Gln Lys Pro Gly Ser Ser Pro Lys Pro Tri Ile Tyr Ala Thr Ser Asn Leu Ala Ser
Gly Val Pro Val Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile
Ser Arg Val Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Thr Ser Asn
Pro Pro Thr Phe Gly Gly Thr Lys Leu Glu Ile Lys

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FIG. 94A

ATGGGTTGGAGCCTCATCTTGCTCTCCTTGTGCTGTTGCTACGCGTG
TCCTGTCCCAGGTACAAC TG CAGCAGCCTGGGCTGAGCTGGTGAAG
CCTGGGGCCTCAGTGAAGATGTCCTGCAAGGCTTCTGGCTACACATT
ACCAGTTACAATATGCACTGGGAAACAGACACCTGGTGGGCT
GGAATGGATTGGAGCTATTATCCCAGGAAATGGTGATACTCCTACAA
TCAGAAGTTCAAGGCAGGCCACATTGACTGCAAGACAAATCCTCCA
GCACAGCCTACATGCACTGGTCAAGGACTCTGAGGACTCTGCG
GTCTATTACTGTGCAAGATGACTTACTACGGCGGTGACTGGTACTTC
AATGTCTGGGGCGCAGGGACCACGGTCACCGTCTCTGCA

FIG. 94B

Met Gly Trp Ser Leu Ile Leu Leu Phe Leu Val Ala Val Ala Thr Arg Val Leu Ser
Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Lys Pro Gly Ala Ser Val Lys
Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Asn Met His Trp Val Lys
Gln Thr Pro Gly Arg Gly Leu Glu Trp Ile Gly Ala Ile Tyr Pro Gly Asn Gly Asp
Thr Ser Tyr Asn Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser
Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr
Cys Ala Arg Ser Thr Tyr Tyr Gly Gly Asp Trp Tyr Phe Asn Val Trp Gly Ala Gly
Thr Thr Val Thr Val Ser Ala

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FIG. 95A

GACGTCGGCCGCTCTAGGCCTCAAAAAAGCCTCCTCACTACTTCT
GGAATAGCTCAGAGGCCAGGGCGGCTCGGCCTCTGCATAAATAAAA
AAAATTAGTCAGCCATGCATGGGGCGGAGAAATGGGCGGAATGGGCG
GAGTTAGGGCGGGATGGCGGAGTTAGGGCGGGACTATGGTTGCT
GACTAATTGAGATGCATGCTTGCATACTCTGCCTGCTGGGAGCCT
GGGACTTCCACACCTGGTGTGACTAATTGAGATGCATGCTTGC
ATACTTCTGCCTGCTGGGGAGCCCTGGGAGTTCCACACCTAATCT
CACACATTCCACAGAATTAACTTCCCTAGTTATTAAATAGTAATCAATT
ACGGGGTCAATTAGTTCATAGCCCATAATGGAGTTCCGCGTTACATAA
CTTACGGTAAATGGCCCGCCTGGCTGACGCCAACGACCCCGCC
ATTGACGTCAATAATGACGTATGTCCTAGTAACGCCAATAGGG
CTTCCATTGACGTCAATGGGTGGACTATTTACGGTAAACTGCCACT
TGGCAGTACATCAAGTGTATCATATGCCAAGTACGCCCTATTGACG
TCAATGACGGTAAATGGCCCGCCTGGCATTATGCCAGTACATGACCT
TATGGGACTTTCTACTTGGCAGTACATCTACGTTAGTCATCGCTA
TTACCATGGTGATGCCGTTTGGCAGTACATCAATGGCGTGGATAGC
GGTTTACTCACGGGATTCCAAGTCTCCACCCCATTGACGTCAATG
GGAGTTTGTGGCACCATAACGGGACTTCCAATGGTCAATGCGTA
ACAACCTCCGCCCATGACGCAAATGGCGGTAGGCGTGTACGGTGG
GAGGTCTATATAAGCAGAGCTGGGTACGTGAACCGTCAGATGCCCT
GAGACGCCATCACAGATCTCACCATGAGGGTCCCGCTCAGCTCC
GGGGCTCCCTGCTGCTGCTGCCAGGTGCACGATGTGATGGTACCAA
GGTGGAAATCAAACGTACGGTGGCTGACCATCTGCTTCATCTTCCC
GCCATCTGATGAGCAGTTGAAATCTGGAACTGCCCTGTGCTGCT
GCTGAATAACTTCTATCCAGAGGGCAAAAGTACAGTGGAAAGGTGG
ATAACGCCCTCCAATGGGTAACCTCCAGGGAGGTGTCAGAGCAG
GACAGCAAGGACAGCACCTACAGCCTCAGCAGCACCTGACGCTGAG
CAAAGCAGACTACGAGAAACACAAAGTACGCCCTGCGAAGTCAAC
ATCAGGGCCTGAGCTGCCGTCAAAAGAGCTCAACAGGGGAGAG
TGTGAATTAGTCACTGCCGTAAAGGTACCAACTACCTAGACTGGATT
GTGACAAACATGCCGTGATATCTACGTATGATCAGCCTCGACTGTG
CCTCTAGTTGCCAGCCATCTGTGTTGCCCTCCCCGTGCCCTCCT
TGACCCCTGGAAGGTGCCACTCCACTGCCCTTCTAATAAAATGAGG
AAATTGCATGCCATTGCTGAGTAGGTGTCATTCTATTCTGGGGGTG
GGTGGGGCAGGACAGCAAGGGGGAGGATTGGAAGACAATAGCAG
GCATGCTGGGATGCCGTGGCTCTATGGAACCAAGCTGGGCTCGAC
AGCTATGCCAAGTACGCCCTATTGACGTCAATGACGGTAAATGGC
CCGCTGGCATTATGCCAGTACATGACCTATGGGACTTTCTACTT
GGCAGTACATCTACGTATTAGTCATGCCATTACCATGGTGTGCGGT
TTGGCAGTACATCAATGGCGTGGATAGCGGTTGACTCACGGGAA
TTCCAAGTCTCCACCCATTGACGTCAATGGGAGTTGTTGGCAC

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FIG. 95B

CAAAATCAACGGGACTTCAAAATGCGTAACAACCTCGCCCCATTG
ACGCAAATGGCGGTAGGCGTGTACGGTGGGAGGTCTATAAGCAG
AGCTGGGTACGTCTCACATTCACTAGTGTACGCACTGAACACAGACCC
GTCGACATGGGGTGGAGCCTCATCTGCTCTCCCTGTCGCTTGTGCTA
CGCGTGTGCTAGCACCAGGGCCATCGGCTTCCCCCTGGCACCCCT
CCTCAAGAGCACCTCTGGGGGACAGCGGCCCTGGGCTGCGTGGTC
AAGGACTACTTCCCAGACCGGTGACGGTGTGCTGGAACCTCAGGC
CCTGACCAGCGCGTGCACACCTCCCGCTGTCCTACAGTCTCAGG
ACTCTACTCCCTCAGCAGCGTGGTACCGTGCCTCCAGCAGCTTGGG
CACCCAGACCTACATCTGCAACGTGAATACAAGCCCAGCAACACCA
AGGTGGACAAGAAAGCAGAGCCAAATCTTGACAAAACACACA
TGCCCCACCGTCCCCAGCACCTGAACCTCTGGGGGACCGTCAGTCTC
CTCTCCCCCCTAAACCCAAGGACACCTCATGATCTCCCGACCCCT
GAGGTACATGCGTGGTGTGGACGTGAGCCACGAAGACCTGAGGT
CAAGTCAACTGGTACCTGGACGGCGTGGAGGTGCTATGCAAGAAG
CAAAGCCCGGGAGGAGCAGTACAACAGCACGTACCGTGTGGTCAG
GTCTCACCGTCTGACCAGGACTGGCTGAATGGCAAGGACTACAA
GTGCAAGGTCTCAACAAAGCCCTCCAGCCCCCATCGAGAAAACCA
TCTCAAAGCAAAGGGCAGCCCCGAGAACCAACAGGTGTACACCTG
CCCCCATCCCGGGATGAGCTGACCAGGAACCAGGTCACTGACCTG
CCTGGTCAAAGGCTCTATCCAGCGACATGCCGTGGAGTGGGAGA
GCAATGGGACGGCTCTCTCTCTACAGCAAGCTCACCGTGGACAG
GACTGGGACGGCTCTCTCTCTACAGCAAGCTCACCGTGGACAG
AGCAGGTGGCAGGGGAAACGTCTCTCATGCTCCGTGATGCTGA
GGCTCTGCACAACCAACTACACGCAAGAGGCCTCCCTGCTCCGGG
TAAATGAGGATCCGTTAACGGTTACCGAACTACCTAGACTGGATTGCTG
ACAACATGCGGCCGTGATATCTACGTATGATCACCTCGACTGTGCCT
TCTAGTTGCCAGCCATCTGTTGTTGCCCTCCCCGTGCCTCCCTGA
CCCTGGAAAGGTGCCACTCCACTGTCTTCTCTAATAAAATGAGGAAA
TTGCATCGCATTTGCTGAGTAGGTGTCTTCTATCTGGGGGGTGGGG
TGGGGCAGGACAGCAAGGGGGAGGATTGGGAAGACAATACGAGGCA
TGCTGGGATGGGTGGGGTCTATGGAAACAGCTGGGGCTGACAGC
GCTGGATCTCCGATCCCCAGCTTGTCTCAATTCTTATTGCTGA
ATGAGAAAAAAAGGAAAATAATTAAACACCAATTCACTAGTAGTTGAT
TGAGCAAATGCGTTGCCAAAAAGGATGCTTGTAGAGACAGTGTCT
GCACAGATAAGGACAAACATTATTCACTAGAGGGAGTACCCAGAGCTGAG
ACTCTTAAGCCAGTGAGTGGCACAGCATTCTAGGGAGAAATATGCTT
GTCACTACCGAAGCCTGATTCCGTAGAGCCACACCTGGTAAGGGCC
AATCTGCTCACACAGGATAGAGAGGGCAGGAGCCAGGGCAGAGCAT
ATAAGGTGAGGTAGGATCACTGCTCTCACATTGCTCTGACATAG
TTGTGTTGGGAGCTGGATAGCTTGGACAGCTCAGG

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FIG. 95C

GCTCGGATTCGCGCCAAACTTGACGGCAATCTAGCGTGAAGGCTG
GTAGGATTTATCCCCGCTGCCATCATGGTCGACCAATTGAAGTGCAT
CGTCGCGTGTCCCAAAATATGGGGATTGGCAAGAACGGAGACCTAC
CCTGGCCTCCGCTCAGGAACGAGTTCAAGTACTTCAAAGAACATGACC
ACAACCTCTCAGTGGAAAGGTAAACAGAACATCTGGTATTATGGGTAG
GAAAACCTGGTCTCCATCTCTGAGAACAACTGACCTTAAAGGACA
GAATTAATATAGTCTCAGTAGAGAACACTAAAGAACCCACCGAGGA
GCTCATTTCTGCCAAAGTTGGATGATGCCCTAAAGACTTATTGAA
CAACCGGAATTGGCAAGTAAAGTAGACATGGTTGGATAGTCGGAGG
CAGTTCTGTTTACCAAGGAAGCCATGAATCAACCCAGGCCACCTTAGACT
CTTGTGACAAGGATCATGCAGGAATTGAAAGTGACACGTTTCTCC
AGAAATTGATTGGGAATATAAACTTCTCCAGAACATCCAGGC
TCCCTCTGAGGGTCCAGGAGGAAAAGGCATCAAGTATAAGTTGAA
GTCTACGAGAACAGACTAACAGGAAGATGCTTCAAGTTCTCTGC
TCCCCCTCTAAAGTCATGCATTTTATAAGACCATGGGACTTTGCTG
GCTTAGATCAGCCTCGACTGTGCCTCTAGTGGCAGCCATCTGTTG
TTGCCCTCCCCGTGCCCTCTGACCCGGAAAGTGCCACTCCCA
TGTCCCTTCCTAATAAAATGAGGAAATTGCATCGCATTGTCAGTAG
GTGTCATTCTATTCTGGGGGTGGGGTGGGGCAGGACAGCAAGGGGG
AGGATTGGGAAGACAATAGCAGGCATGCTGGGATGCGTGGGCT
ATGGAACCAGCTGGGCTCGAGCTACTAGCTTCTCAATTCTT
ATTGTCATAATGAGAAAAAAAGGAAATTAAATTAAACACCAATTCA
GTAGTTGATTGAGAACATGCGTGTGCCAAAAGGATGCTTAGAGACA
GTGTCCTCTGCACAGATAAGGACAAACATTATTCAAGAGGGAGTACCC
AGAGCTGAGACTCTAACCGCAGTGGCAGACGATCTAGGGAGA
AATATGCTTGTATCACCGAACGCTGATTCCGTAGAGCCACACCTGG
TAAGGGCCAATCTGTCACACAGGATAGAGAGGGCAGGAGCCAGGG
CAGAGCATATAAGGTGAGGTAGGATCAGTTGCTCTCACATTGCTTC
TGACATAGTTGTTGGGAGCTTGGATCAGTCCTCTATGGTTGAACAA
GATGGATTGCAACGCAAGTTCTCCGGCCGTTGGGTGGAGAGGCTATT
GGCTATGACTGGCACAACAGAACATCGGCTGCTCTGATGCCGCCGT
GTTCCGGCTGTCAGCGCAGGGGCGCCCGGTTCTTGTCAAGACCGA
CTGTCGGCTGCCACGACGGCAGTCCCTGCGCAGCTGTGCTGACGTTG
TCACTGAAGCGGGAAAGGGACTGGCTGCTATTGGCGAAGTGGGG
CAGGATCTCTGTATCTCACCTGCTCTGCCAGAACAGTATCCATC
ATGGCTGATGCAATGCGGGGGCTGCATACGCTTGATCCGGCTACCTGC
CCATTGACCAACAGAACATCGCAGTGCAGCGAGCACGTA
GATGGAAGCGGGCTTGTGATCAGGATGATCTGGACGAAGAGCATC
AGGGGCTGCCAGCCAACTGTTGCCAGGCTCAAGGCCGCATG
CCCGACGGCGAGGAATCTCGTGTGACCCATGGCGATGCCCTGCTGCCG

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FIG. 95D

AATATCATGGTGGAAAATGGCCGTTTCTGGATTCACTGACTGTGGC
CGGCTGGGTGCGGACCGCTATCAGGACATAGCGTGGCTACCCG
TGATATTGCTGAAGAGCTGGCGCGAATGGGTGACCGCTTCCTCGT
GCTTACCGTATGCCGCTTCCCGATTCGCAGCGCATGCCCTATC
GCCTTCTTGACGAGTTCTCTGAGCGGGACTCTGGGTTGAAATGAC
CGACCAAGCGACGCCAACCTGCCATCACAGAGATTTCGATTCACCG
CCGCCTTCTATGAAAGGTTGGCTTCGAATCGTTTCCGGGACGCCG
GCTGGATGATCCTCCAGCGGGGATCTCATGCTGGAGTTCTCGCCC
ACCCCAACTGTTATTGCACTTATAATGGTACAAATAAGCAATA
GCATCACAAATTCAAAATAAAGCATTTTTCACTGCAATTAGTT
GTGTTTGTCACAAACTCATCAATCTATCTTATCATGTCGGATCGCGG
CCCGGATCCCGTCGAGAGCTTGGCGTAATCATGGTCAAGCTGTTCC
TGTGAAATTGTTATCCCGTACAATTCCACACAACATACGAGCCGG
AGCATAAAGTGTAAAGCCTGGGCTGAATGAGTGAGCTAACTCAC
ATTAATTGCGTTCGCGTCATGCCGCTTCCAGTCGGGAAACCTGTC
GTGCCAGCTGCATTAAATGAATCGGCCAACCGCGGGGAGAGGCGTT
TGCATATTGGCGCTTCCGCTTCCTCGCTCACTGACTCGTCGCTC
GGTCGTTCCGCTGCGCGAGCGGTATCAGCTACTCAAAGCGGGTA
TACGGTTATCCACAGAATAGGGATAACGCAAGGAAAGAACATGTGA
GCAAAAGGCCAGCAAAGGCCAGGAACCGTAAAAGGCCGTTGC
TGGCGTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATC
GACGCTCAAGTCAGAGGTGGCAGAACCCGACAGGACTATAAGATAC
CAGCGTTTCCCGTGAAGCTCCCTGTCGCTCTCTGTTCCGACC
CTGCCGCTTACCGATACTGTCCGCTTCTCCCTCGGGAAAGCGTG
GCGTTTCTCAATGTCACGCTGTAGGTATCTCAAGTTGGTAGGTC
GTTCGCTCAAGCTGGGCTGTGACGAACCCCCGTTCAAGCCGAC
CGCTGCGCTTATCCGTAACTATCGTCTTGAGTCAACCCGTAAGA
CACGACTTATGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAG
AGCGAGGTATGTAGGCGGTGCTACAGAGTTCTGAAGTGGTGGCCTA
ACTACGGCTACACTAGAAGGACAGTTGGTATCTGCCTCTGCTGA
AGCCAGTTACCTCGGAAAAAGAGTTGGTAGCTTGTGATCCGGCAAA
CAAACCAACCGCTGGTAGCGGTGTTTTGTTGCAAGCAGCAGATT
ACCGCAGAAAAAAAGGATCTCAAGAAGATCTTGTGATCTTCTAC
GGGTCTGACGCTCAGTGGAACGAAAACTCACGTTAAGGGATTGG
TCATGAGATTATCAAAAGGATCTCACCTAGATCTTAAATTAAA
AATGAAGTTAAATCAATCTAAAGTATATGAGTAAACTGGTCTG
ACAGTTACCAATGCTTAATCAGTGAGGCACCTATCTCAGCGATCTG
TATTGCTCATCCATAGTGCCTGACTCCCCGTCGTGAGATAACTAC
GATACTGGGAGGGCTTACCATCTGGCCCCAGTGCAGTCAATGATACC
GAGACCCACGCTCACGGGCTCCAGATTATCAGCAATAAACCGCCA
GCCGGAAAGGGCCGAGCGCAGAAGTGGTCTGCAACTTATCCGCTC
CATCCAGTCTATTAAATTGTTGCCGGAAAGCTAGAGTAAGTAGTTG

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FIG. 95E

CAGTTAATAGTTGCGCAACGTTGTTGCCATTGCTACAGGCATCGTGG
TGTACGCTCGTCTGGTATGGCTTCATTCACTCCGGTCCAAAC
GATCAAGGCAGTTACATGATCCCCCATGTTGTGCAAAAAAGCGGTT
AGCTCCTCGGTCCGATCGTTGTCAAGTAAGTTGGCCCGCAGTG
TTATCACTCATGGTTATGGCAGCACTGCATAATTCTTACTGTATGC
CATCCGTAAGATGCTTCTGTGACTGGTGAGTACTCAACCAAGTCAT
TCTGAGAATAGTGTATGCGCGACCGAGTTGCTTGTGCCCCGGCGTCAA
TACGGGATAATACCGGCCACATAGCAGAACTTAAAAGTGTCTAC
ATTGGAAAACGTTCTCGGGCGAAAACCTCAAGGATCTTACCGCTG
TTGAGATCCAGTTGATGTAACCCACTCGTGCACCCAAGTATCTTCA
GCATCTTTACTTTACCCAGCGTTCTGGGTGAGCAAAAACAGGAAGG
CAAAATGCCGAAAAAAGGAATAAGGGCGACACGGAAATGTTGAA
TACTCATACTCTCCCTTTCAATATTATTGAAGCATTTATCAGGGTTA
TTGTCTCATGAGCGGATACATATTGAATGTATTAGAAAATAAACCA
AATAGGGTTCCCGCGCACATTCCCCGAAAAGTGCCACCT

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FIG. 96A

GACGTCGGCCGCTCTAGGCCTCCAAAAAAAGCCTCTCACTACTTCT
GGAATAGCTCAGAGGCCAGGGCGCTGGCCTCTGCATAAATAAAA
AAAATTAGTCAGCCATGCATGGGGCGGAGAATGGCGGAAGTGGCG
GAGTTAGGGCGGGATGGCGGAGTTAGGGCGGGACTATGGTTGCT
GACTAATTGAGATGCATGTTGCATACTTCTGCTGCTGGGAGCCT
GGGACTTICACACCTGGTGTGACTAATTGAGATGCATGTTGC
ATACTTCTGCCTGCTGGGAGCCTGGGACTTCCACACCCACTGA
CACACATTCCACAGAATTAAATTCCCTAGTTATAATAGTAATCAATT
ACGGGGTCAATTGTCATAGCCCATAATGGAGTCCGGTATACATAA
CTTACGGTAAATGGCCCGCTGGCTGACGCCAACGACCCCGCC
ATTGACGTCAATAATGACGTATGTCCTAGTAACGCCAACGACCCCGCC
CTTCCATTGACGTCAATGGGTGGACTATTTACGGTAAACTGCCACT
TGGCAGTACATCAAGTGTATCATATGCCAAGTACGCCACTATTGACG
TCAATGACGGTAAATGGCCCGCTGGCATTATGCCAGTACATGACCT
TATGGGACTTCTACTTGCAGTACATCTACGTATTAGTCATCGCTA
TTACCATGGTGATGCGGTTTGGCAGTACATCAATGGCGTGGATACC
GGTTTGAACGCCGGATTCCAAGTCTCACCCATTGACGTCAATG
GGAGTTTGTGGCACC AAAATCAACGGGACTTCCAAATGTCGTA
ACAACCTCCGCCATTGACGCAAATGGCGGTAGGCCTGTACGGTGG
GAGGTCTATATAAGCAGAGCTGGGTACGTGAACCGTCAGATGCC
GAGACGCCATCACAGATCTCACTATGGATTTCAGGTGAGATTAT
CAGCTTCTGCTAATCAGTCTTCAGTCATAATGTCAGAGGACAAAT
TGTTCTCTCCCACTCTCCAGCAATCTGCTGCTCATCTCCAGGGGAGAA
GGTACAATGACTTGCAGGGCCAGCTCAAGTGTAAAGTACATCCACT
GGTTCCAGCAGAAGGCCAGGATCTCCCTCAACCCCTGGATTATGCCA
CATCCAACCTGGCTCTGGAGTCCCTGCTCAGTGGCAGTGGGT
CTGGGACTTCTACTCTCAACAATCAGCAGAGTGGAGGCTGAAGATG
CTGCCACTTATTACTGCCAGCAGTGGACTAGTAACCCACCCAGTTC
GAGGGGGGACCAAGCTGAAATCAAACGTACGGTGGCTGACCATCT
GTCTTCATCTCCGCCATCTGATGAGCAGTGTAAATCTGGAACCTGCC
TCTGTTGTGCTGCTGAATAACTCTATCCCAGAGAGGCCAAAGTA
CAGTGGAAAGGTGATAACGCCCTCCAATCGGGTAACCTCCAGGAGAG
TGTACACAGGAGGACAGCAAGGACAGCACCTACAGCCTCAGCAGCA
CCCTGACGCTGAGCAAAGCAGACTACAGAGAAACACAAAGTCTACGCC
TGCGAAGTCACCCATCAGGGCCTGAGCTGCCCTCAGAAGAGCTT
CAACAGGGGAGAGTGTGAATTCAAGATCGCTAACGGTTACCAACTA
CCTAGACTGGATTCTGACAACATCGGGCGTGTATCTACGGTATGAT
CAGCCTGACTGTGCCCTCTAGTTGCCAGCCATCTGTTGCTGCC
CCCCGTGCCCTCCTGACCCTGGAAGGTGCCACTCCACTGTCCCTTCC

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FIG. 96B

TAATAAAATGAGGAAATTGCATCGCATTGTCAGTAGGTGTCATTCT
ATTCTGGGGGGTGGGTGGGCAGGACAGCAAGGGGGAGGATTGGG
AAGACAATAGCAGGATCGCTGGGATGCGGTGGCTATGGAACCA
GCTGGGGCTCGACAGCTATGCCAAGTACGCCCTATTGACGTCAATG
ACGGTAAATGCCCGCCTGCATTATGCCAGTACATGACCTTATGGG
ACTTCTACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCAT
GGTATGCGGTTTGGCAGTACATCAATGGCGTGGATAGCGGTTG
ACTCACGGGATTCCAAGTCTCCACCCATTGACGTCAATGGAGTT
TGTTTGGCACCAAAATCAACGGGACTTCAAAATGTCGAACAAC
CCGCCCATGACGAAATGGCGGTAGGCGTGTACGGTGGAGGTC
TATATAAGCAGAGCTGGTACGTCCACATTCACTGATCAGCACTGA
ACACAGACCCCTCGACATGGGTTGGAGCCTCATCTGCTCTCCTGT
CGCTGTTGCTACGCGTCTGTCCAGTACAACACTGCAGCAGCCTGG
GGCTGAGCTGGTGAAGCTGGGCGCTCAGTGAAGATGTCCTGCAAGG
CTTCTGGCTACACATTACAGTACAAATATGCACTGGTAAACAGA
CACCTGGTCGGGCGTGGATGGATTGGAGCTATTATCCGGAAAT
GGTATACTTCTACAATCAGAAGTCAAAAGGAAGGCCACATTGAC
TGCAGACAAATCCTCCAGCACAGCCTACATGCACTGAGCAGCCTGA
CATCTGAGGACTCTGCGGTCTATTACTGTGCAAGATGCACTTACAG
GCGGTGACTGGTACTTCAATGTCCTGGCGCAGGGACCACGGTCACC
GTCTCTGCGACTAGCACCAAGGGCCATCGGTCTTCCCCCTGGCACCC
TCCCTCAAGAGCACCTCTGGGGCACAGCGGCGTGGCTGCTGGT
CAAGGACTACTTCCCGAACGGTGAACGGTGTGGAACTCAGCG
CCCTGACCAGCGCGTGCACACCTCCGGCTGCTTACAGTCTCAG
GACTCTACTCCCTCAGCAGCGTGGTGAACCGTGCCTCCAGCAGCTGG
GCACCCAGACCTACATCTGCAACGTGAATCACAAGCCAGCAACACC
AAGGTGGACAAGAAGCAGAGCCAAATCTTGTGACAAAACCTCACAC
ATGCCCAACCGTCCCCAGCACCTGAACCTGCTTGGGGACCGTCAGTCTT
CCTCTTCCCCCAAAACCCAAAGGACACCCCTCATGATCTCCGGACCC
TGAGGTCAATGCGTGGTGGACGGTGAACGGTGTGGAGGTGCAATAATGCCAAG
TCAAGTTCAACTGGTACGTGGACGGCGTGGAGGTGCAATAATGCCAAG
ACAAAGCCGCGGGAGGAGCAGTACACAAGCAGCTACCGTGTGGTCA
CGTCTCACCGTCTGCACCAAGGACTGGCTGAATGGCAAGGAGTACA
AGTCAAGGTCCAACAAAGCCCTCCAGCCCCATCGAGAAAACC
ATCTCCAAGCCAAGGGCAGCCCCGAGAACCCACAGGTGACACCC
GCCCCCATCCGGATGAGCTGACCAAGAACCCAGGTGACGCTGACCT
GCCGGTCAAGGCTCTATCCAGCGACATGCCGTGGAGTGGAG
AGCAATGGGACGGAGAACAACTACAGACGACCGCTCCGTGCT
GGACTCCGACGGCTCTTCTCCTCTACAGCAAGCTACCGTGGACAA
GAGCAGGTGGCAGCGAGGGAAACGCTCTCATGCTCCGTGATGCATG
AGGCTCTGCACACCACACCGCAGAAGAGCCCTCCCTGCTCCGG
GTAAATGAGGATCCGTTACGGTTACCAACTACCTAGACTGGATTCTGT

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FIG. 96C

GACAACATGCGGCCGTATCTACGTATGATCAGCCTCGACTGTGCC
 TTCTAGTTGCCAGCCATCTGTTGTTGCCCTCCCCGTGCCTTCTTG
 ACCCTGGAAGGTGCCACTCCCACTGTCCTTCTAATAAAATGAGGAA
 ATTGCATCGCATTGTCAGTAGGTGTCATTCTATTCTGGGGGTGGG
 GTGGGGCAGGACAGCAAGGGGAGGATTGGGAAGACAATAGCAGGC
 ATGCTGGGGATCGCGTGGGCTCATGGAAACAGCTGGGGCTCGACAG
 CGCTGGATCTCCGATCCCCAGCTTGTCTCAATTCTATTGCT
 AATGAGAAAAAAAGGAAAATTAATTAAACCCAATTCTAGTAGTTGA
 TTGAGCAAATCGCTTGCAAAAAGGATGCTTAAAGACAGTTCT
 GCACAGATAAGGACAAACATTATTCAAGAGGGAGTACCCAGAGCTGAG
 ACTCCTAAGCCAGTGAGTGGCACAGCATTCTAGGGAGAAATATGCTT
 GTCATCACCGAAGCCTGATTCCGTAGAGCCACACCTTGGTAAGGGCC
 AATCTGTCACACAGGATAGAGAGGGCAGGAGCCAGGGCAGAGCAT
 ATAAGGTGAGGTAGGATCAGTGTCTCTCACATTGCTTGTACATAG
 TTGTGTTGGGAGCTGGATAGCTTGGACAGCTCAGGGCTCGATTTCG
 CGCCAAACTGACGGCAATCCTAGCGTGAAGGCTGGTAGGATTITATC
 CCCGCTGCCATCATGGTTCGACCATTGAACTGTCATCGTCGGCT
 CAAAATATGGGGATTGGCAAGAACGGAGACCTACCCCTGGCTCCGCT
 CAGGAACGAGTTCAAGTACTTCCAAGAACATGACCACAAACCTTCA
 TGGAAAGGTAACAGAATCTGGTATTATGGTAGGAAAACCTGGTTC
 TCCATTCTGAGAAGAACATGACCTTAAAGGACAGAACATATAGTT
 CTCAGTAGAGAACCTAAAGAACACCACGAGGAGCTATTCTTG
 CAAAAGTTGGATGATGCCCTAAAGACTTATTGAACAACCGGAATTGG
 CAAGTAAAGTAGACATGGTTGGATAGCTGGAGGGCAGTTCTGTCTTAC
 AGGAAGCCATGAATCAACCAGGCCACCTTGAACCTTTGTGACAAGG
 ATCATGCAGGAATTGAAAGTGACACGTTTCCCAGAAATTGATTTG
 GGGAAATATAAACTCTCCCAGAAATACCCAGGCGTCTCTG
 GGTCCAGGAGGAAAAAGGCATCAAGTATAAGTTGAAGTCTACGAGA
 AGAAAGACTAACAGGAAGATGTTCAAGTTCTGCTCCCCCTCAA
 AGCTATGCATTTTATAAGACCATGGACTTTGCTGGCTTAGATCA
 GCCTCGACTGTGCCCTCTAGTGTGCCAGCCATCTGTTGTTGCCCTCC
 CCGTGCCTCCTGACCTTGGAGGTGCCACTCCACTGTCTTCTCTA
 ATAAAATGAGGAAATTGTCATCGCATTGTCAGTAGGTGTCATTCTAT
 TCTGGGGGGTGGGGTGGGGCAGGACAGCAAGGGGGAGGATTTGGGAA
 GACAATAGCAGGCATGCTGGGATGGGTGGGCTATGGAAACCCAG
 TGCGCTCGAGCTACTAGCTTGTCTCAATTCTATTGCTGACAATG
 AGAAAAAAAGGAAATTAAATTAAACCCAATTCTAGTAGTTGATTGA
 GCAAATGCGTTGCCAAAAGGATGCTTAAAGACAGCTGTTCTG
 CAGATAAGGACAAACATTATTCAAGAGGGAGTACCCAGAGCTGAGACT
 CCTAAGCCAGTGAATGGCACAGCATTCTAGGGAGAAATATGCTTGT
 ATCACCGAAGCCTGATTCCGTAGAGGCCACACCTTGGTAAGGGCCAAT
 CTGCTCACACAGGATAGAGGGCAGGAGCCAGGGCAGAGCATATA
 AGGTGAGGTAGGATCAGTTGCTCCTCACATTGCTTCTGACATAGTTG

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FIG. 96D

TGTTGGGAGCTTGGATCGATCCTCTATGGTTGAACAAGATGGATTGCA
CGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTGGCTATGACTG
GGCACACAAGACAATCGCCTGCTCTGATGCCGCCGTGTTCCGGCTGTC
AGCGCAGGGGCCCGGTTCTTGTCAAGACCGACCTGTCGGGTGTC
CCTGAATGAACCTGAGGACGAGGCGCAGCTGACGTTGTCAGTGAAAGC
CGACGGCGTTCTGCGCAGCTGTCAGCTGACGTTGTCAGTGAAAGC
GAAGGGACTGGCTGCTATTGGCGAAGTGCCGGGCAGGATCTCCTG
TCATCTCACCTGCTCTGCCAGAAAGTATCCATCATGGCTATGCA
ATGCGCGGCTGCATACGCTGATCCGGTACCTGCCCATCGACAC
CAAGCGAAACATCGCATCGAGCGAGCACGACTCGGATGGAAGCCGG
TCTTGTGATCAGGATGATCTGGACGAAGAGCATCAGGGCTCGCGC
CAGCGAACTGTTGCCAGGCTCAAGGCGCGATGCCGACGGCGAG
GATCTCGTGTGACCCATGGCGATGCTGCTTGGCGAATATCATGGTG
GAAAATGGCCGCTTTCTGATTATCGACTGATGTCGGCGTGGGTG
GCGGACCGCTATCAGGACATAGCTTGGCTACCCGTGATATTGCTGA
AGAGCTTGGCGCGAATGGCTGACCGCTTCTCGTCTTACGGTAT
CGCCGCTCCGATTGCGAGCGCATGCCCTCTATGCCCTTGTGACGA
GTTCTCTGAGCGGGACTCTGGGTTGAAATGACCGACCAAGCGAC
GCCCAACCTGCATCACGAGATTGCAATTCCACCGCCGCTTCTATGA
AAGGITGGCTCGGAATGTTCCGGGACGCCGGCTGGATGATCCT
CCAGCGCGGGGATCTCATGCTGGAGTCTTGCACCCAACTTGT
TATTGCACTTATAATGGTACAATAAAGCAATAGCATCACAAATT
CACAAATAAAGCATTTTACTGCATTCTAGTTGTGGTTGTCCA
ACTCATCAATCTATCTTATCATGTCGGATCGCGCCGCGATCCGTC
GAGAGCTGGCGTAATCATGGTCAGCTGTTCTGTGTGAAATTGT
TATCCGCTCACAATTCCACACAACATACGAGCCGGAAGCATAAAGTG
TAAAGCCTGGGGTGCCTAATGAGTGAAGCTAACACATTAATTGCGT
GCGCTACTGCCGCTTCCAGTCGGAAACCTGTCGTGCCAGCTGCA
TTAATGAATCGGCCAACGCGCGGGAGAGGCGGTTGCGTATTGGGC
GCTCTCGCTTCTCGTCACTGACTCGCTGCCGCTCGTCTTCCGGT
CGCGCAGCGGTATCAGCTCACTAAAGCGGTAAACCGGTTACCGGTT
CAGAATCAGGGGATAACCGCAGGAAAGAACATGTGAGCAAAGGCCA
GAAAAGGCCAGAACCGAAAAAGGCCGCGTTGCTGGCGTTTCC
ATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGT
CAGAGGTGGCGAAACCCGACAGGACTATAAAGATAACCGAGCGTTCC
CCCTGGAAAGCTCCCTCGTGCCTCTCCGTTCCGACCCCTGCCGCTTAC
CGGATACCTGTCGCCCTTCTCCCTCGGAAAGCGTGGCGCTTCTCA
ATGCTCACGCTGTAGGTATCTCAGITCGGTAGGTGCTCGCTCCAA
GCTGGCTGTGTCACGAACCCCCCGTTAGCCGACCGCTGCGCCTT
ATCCGGTAACATCGTCTTGTGAGTCCAACCCGTAAGACACGACTTATC

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FIG. 96E

GCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATG
TAGGCCGTGCTACAGAGTCTTGAAGTGGTGGCTAAGTACCGCTAC
ACTAGAAGGACAGTATTGGTATCTGCGCTCTGCTGAAGCCAGTTAC
TTCGGAAAAAGAGTTGGTAGCTTGTATCCGGCAAACAAACCACCGC
TGGTAGCGGTGGTTTTTGTGCAAGCAGCAGATTACGCGCAGAAA
AAAAGGATCTCAAGAAGATCCTTGATCTTCTACGGGCTGACGC
TCAGTGGAACGAAAACCTACGTTAAGGGATTGGTGTGAGATTATC
AAAAAGGATCTCACCTAGATCCTTAAATTAAAATGAAGTTAA
ATCAATCTAAAGTATATATGAGTAAACTGGTCTGACAGTTACCAATG
CTTAATCAGTGAGGCACCTATCTCAGCGATCTGCTATTGCTTCACTC
ATAGTTGCCCTGACTCCCCCGTGTAGATAACTACGATACGGGAGGG
CTTACCATCTGCCCGAGTGTGCAATGATACCGCGAGACCCACGCTC
ACCGGCTCCAGATTATCAGCAATAAACAGCCAGCCGGAAGGGCCG
AGCCAGAAAGTGGTCTGCAACTTACCGCCTCCATCCAGTCTTAA
ATTGTTGCCGGAAGCTAGAGTAAGTAGTTGCCAGTTAATAGTTGC
GCAACGTTGTCATTGCTACAGGCATCGTGGTGTACGCTCGTCTG
TTGGTATGGCTTCATTGCTCCGGTCCACAGATCAAGGGAGGTTA
CATGATCCCCCATGTTGTGCAAAAAAGCGGTTAGCTCCTCGGTCTC
CGATCGTTGTCAGAAGTAAGTTGGCCGAGTGTATCACTCATGGTTA
TGGCAGCACTGCATAATTCTTACTGTCATGCCATCCGTAAGATGCT
TTCTGTGACTGGTAGTACTCAACCAAGTCATTCTGAGAATAGTGT
TGCGCGACCGAGTTGCTTGTGCGCTCAATACGGGATAATACCC
GCGCCACATAGCAGAACTTAAAGTGTCTCATCATTGGAAAACGTTCT
TCGGGGCGAAAACCTCAAGGATCTACCGCTGGTGAAGATCCAGTCT
ATGTAACCCACTCGTCACCCAACTGATCTGCACTTCTGAGAATAGTGT
CCAGCGTTCTGGGTGAGCAAAACAGGAAGGCAAATGCCGCAAAA
AAGGGAATAAGGGCGACACGGAAATGTTGAATACTCATACTCTTCT
TTTCAATATTATTGAAGCATTATCAGGGTATTGTCTCATGAGCGG
ATACATATTGAATGTATTAGAAAAATAACAAATAGGGGTTCCGC
GCACATTCCCCGAAAAGTGCCACCT

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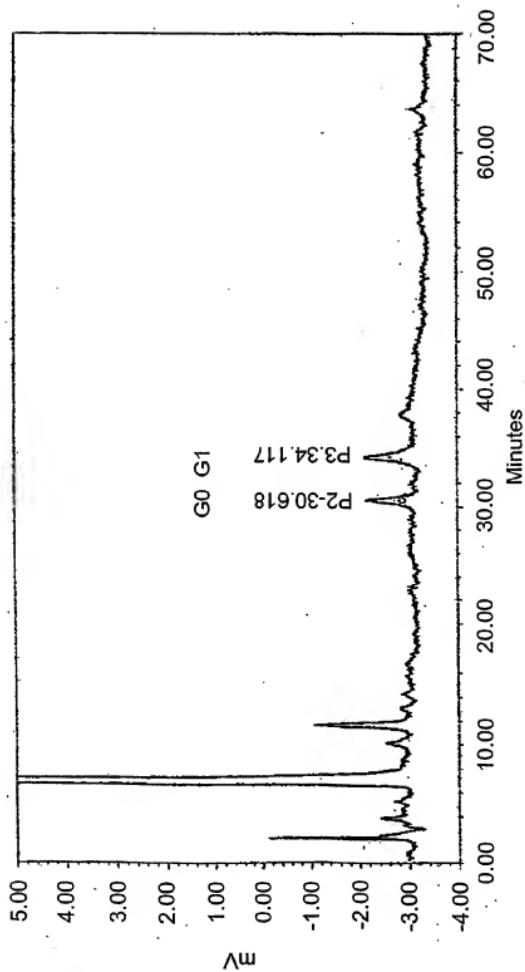


FIG. 97A

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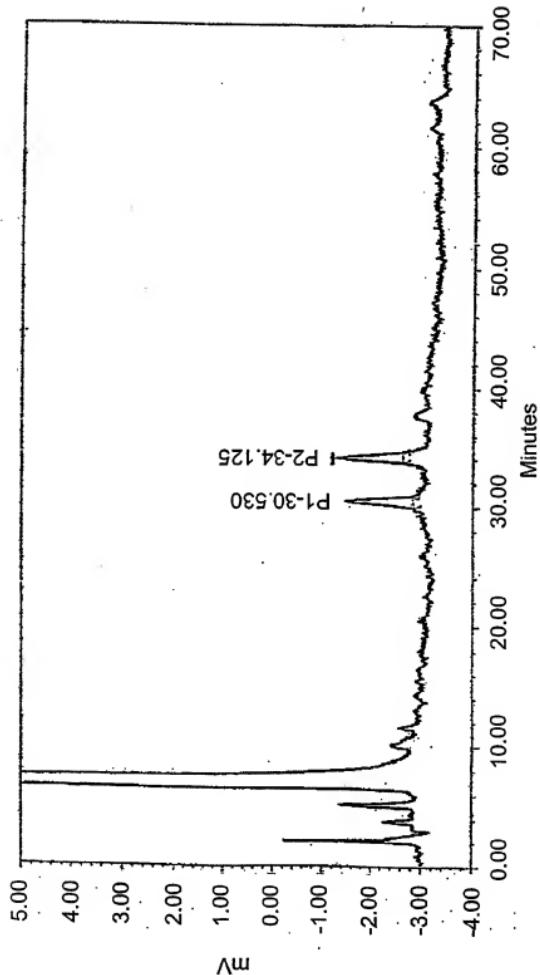


FIG. 97B

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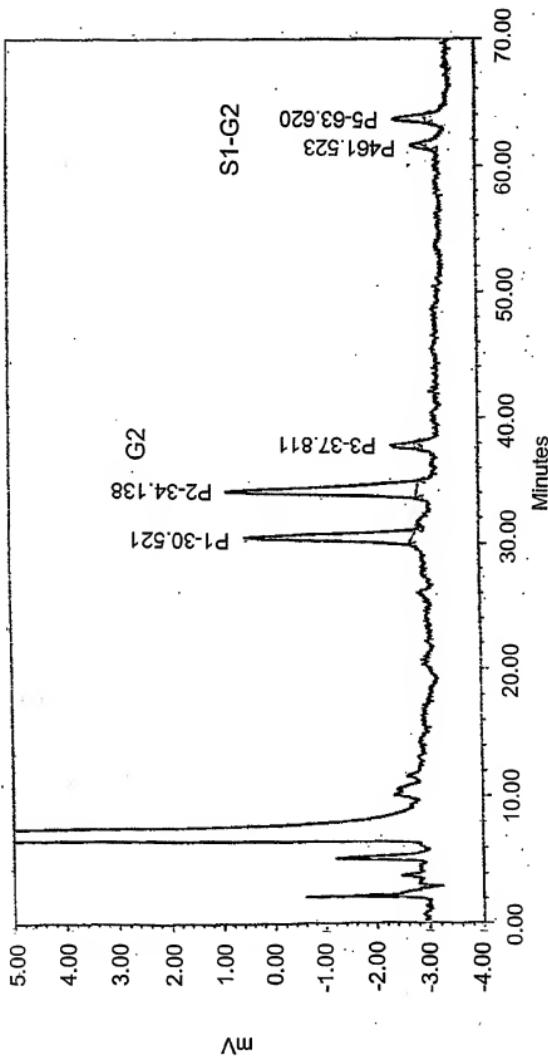


FIG. 97C

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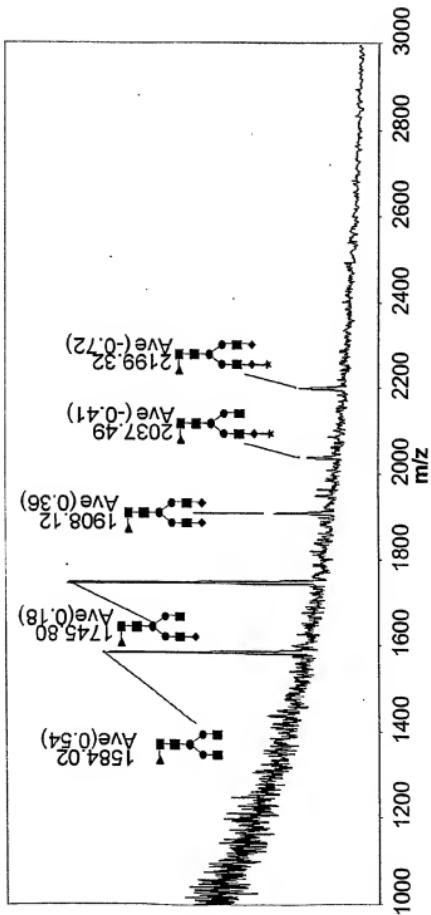


FIG. 98A

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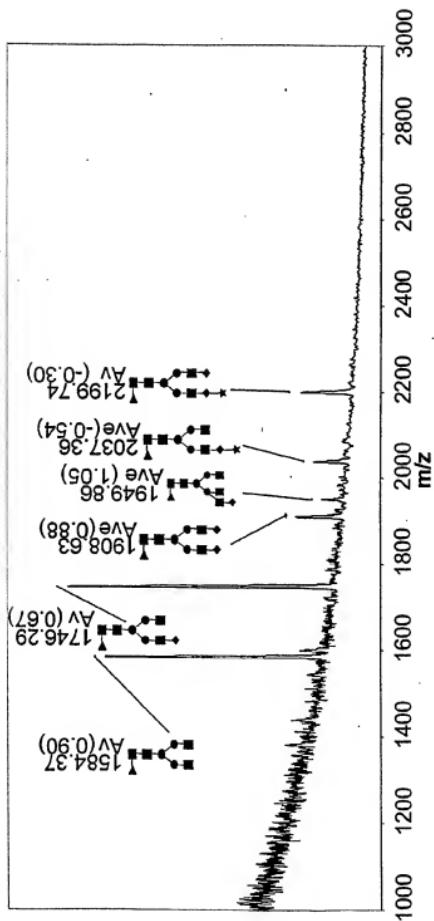


FIG. 98B

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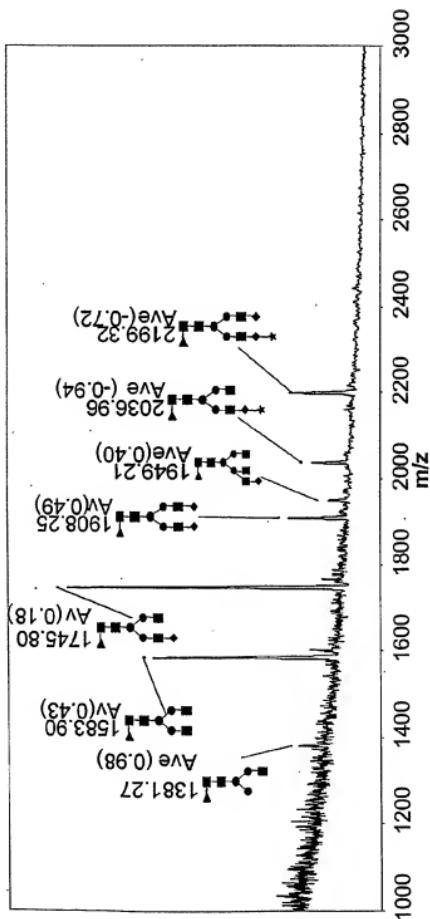


FIG. 98C

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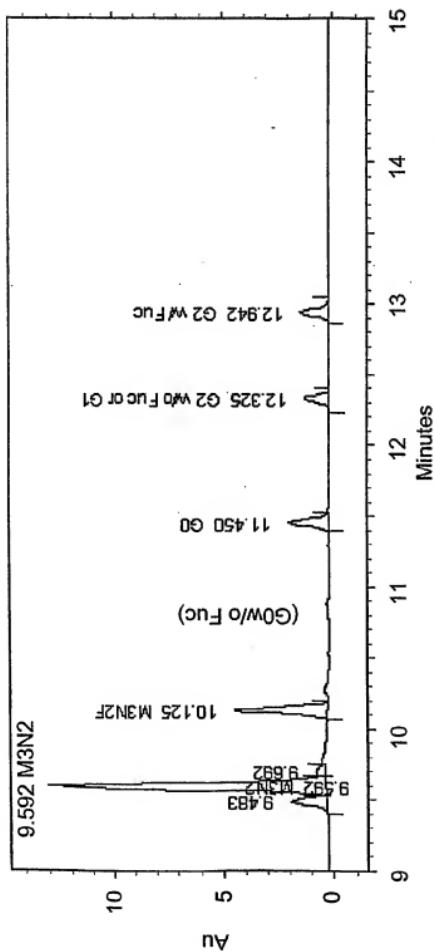


FIG. 99A

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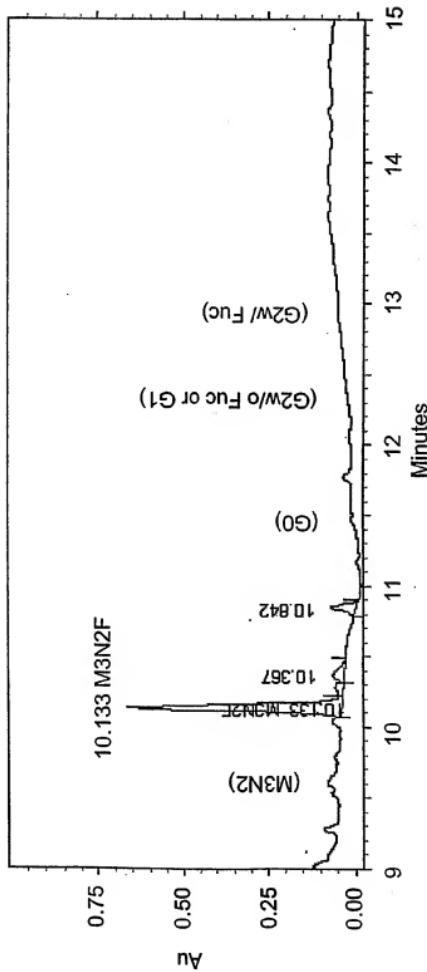


FIG. 99B

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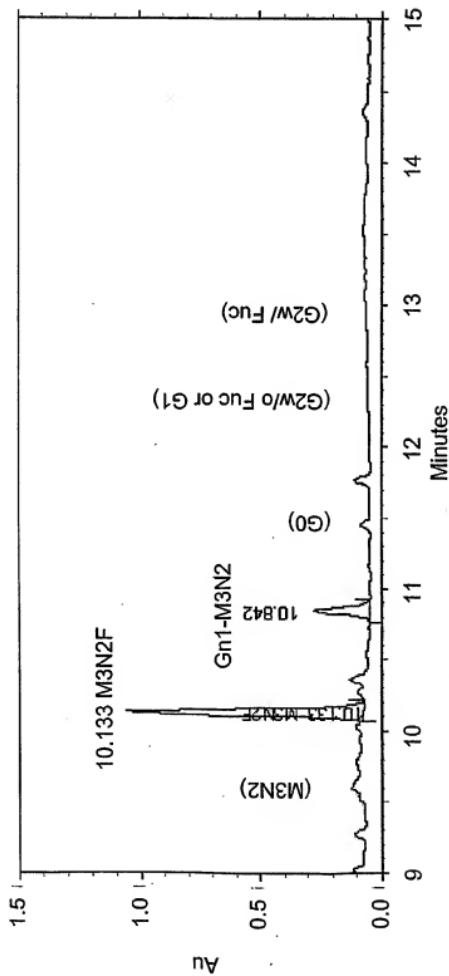


FIG. 99C

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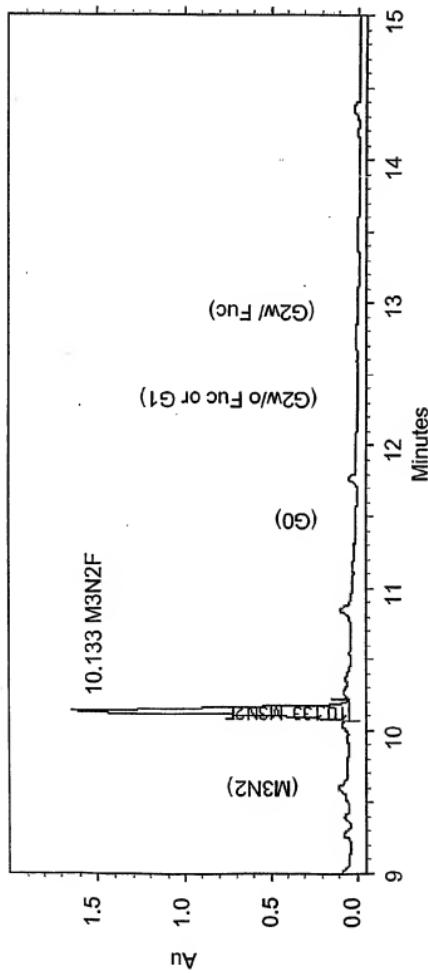


FIG. 99D

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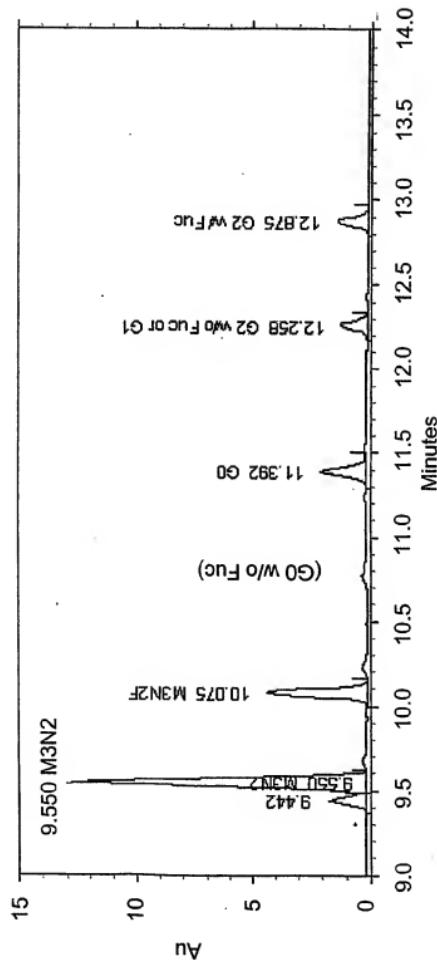


FIG. 100A

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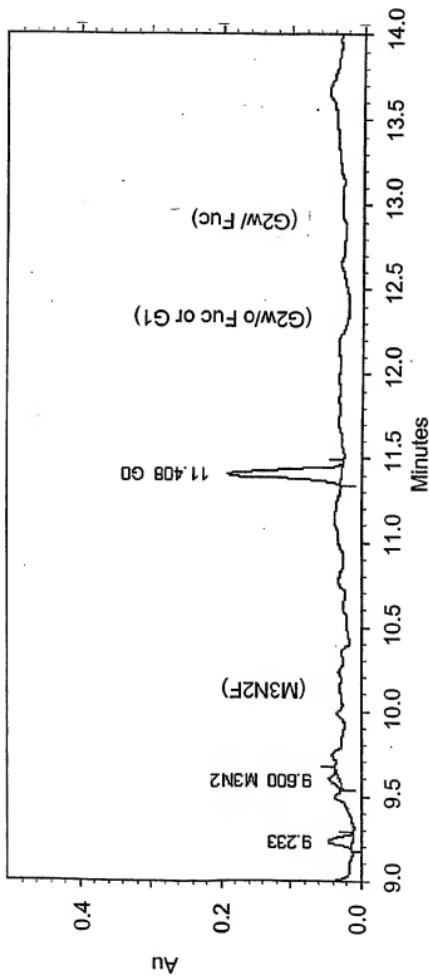


FIG. 100B

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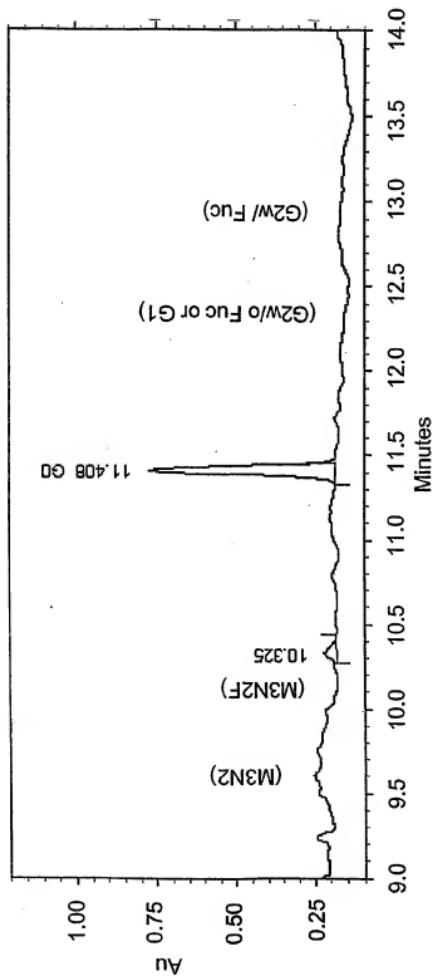


FIG. 100C

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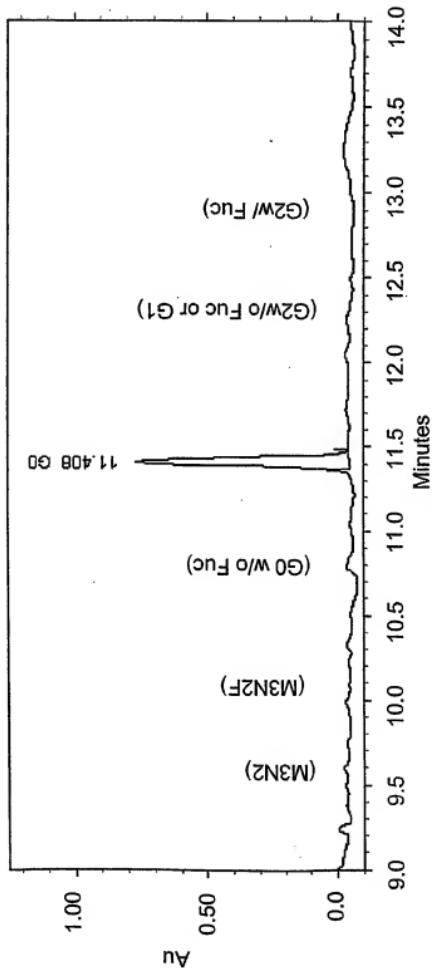


FIG. 100D

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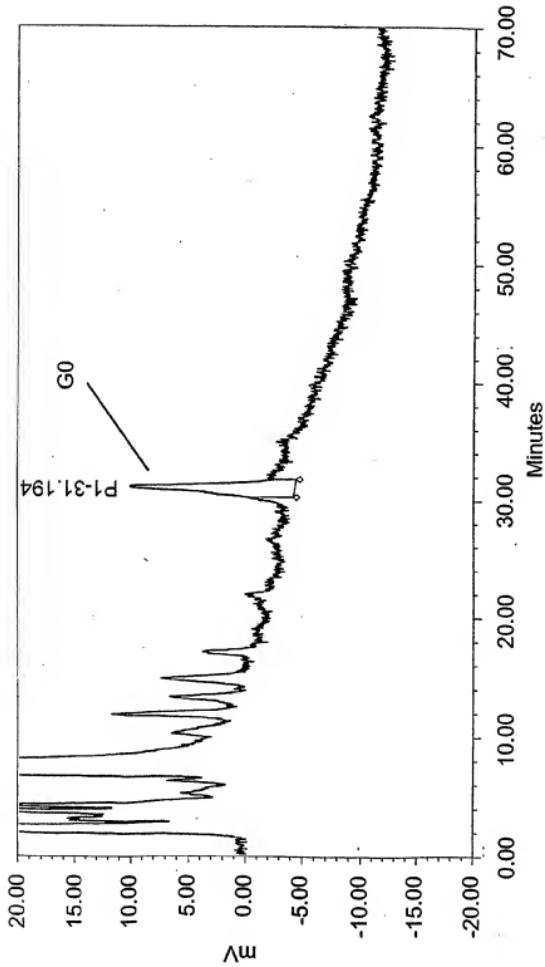


FIG. 101A

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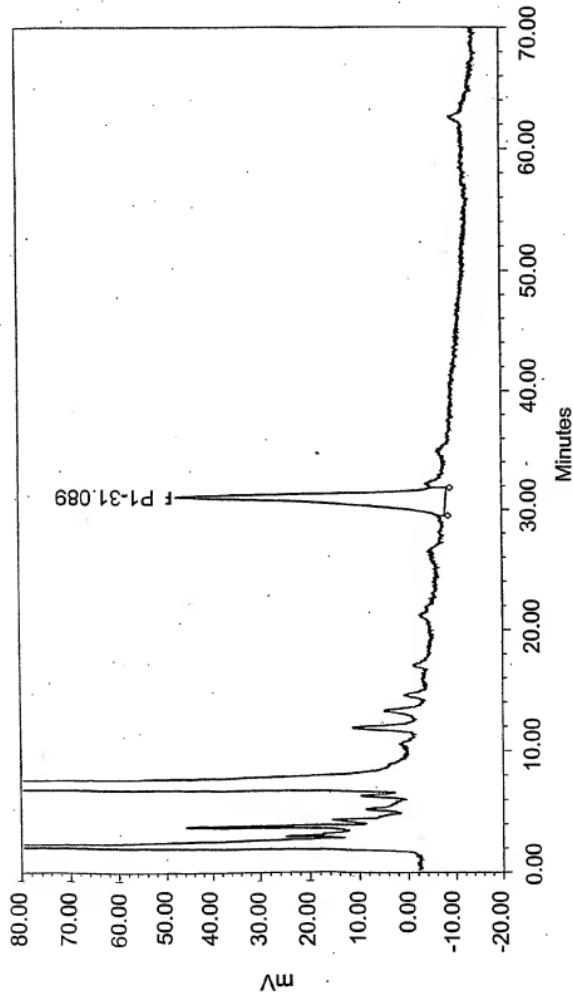


FIG. 101B

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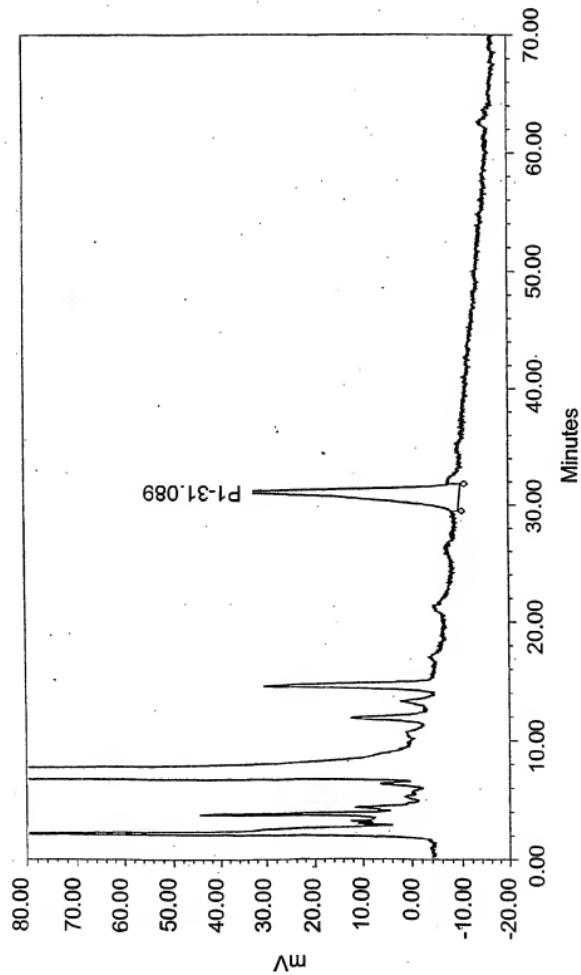


FIG. 101C